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ABSTRACT

This pilot study proposed and tested an institutional development model for use under the provisions of Title III of the Higher Education Act of 1965. The model could be used to improve the funding process and as a basis for future studies of the effects of the program. The study used a broad concept of management that incorporates all aspects of institutional development funded by Title III. The model proposes five phases of structural development with correspondingly different management systems. Testing was done in five colleges and Universities funded by the Advanced Institutional Development Program. Based on the study's findings it is possible to suggest plateaus of development for the planning, management, evaluation, and inquiring systems for institutions in each of four developmental phases, and that change strategies vary in effectiveness according to developmental phases. (MSE)

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STRUCTURE, MANAGEMENT, AND INTERVENTION

FINAL REPORT

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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A Study of Selected Developing Colleges and Universities

prepared by
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Graduate School of Education
for the
United States Office of Education
Office of Planning, Budgeting and Evaluation
December, 1977

HE 009 606

TABLE OF CONTENTS

	Executive Summary	ii
Chapter I	- Introduction	1
Chapter II	- Toward A Model of Structural Development, Management Effectiveness, and External Intervention	12
Chapter III	- Structural Development	30
Chapter IV	- Management Effectiveness	63
Chapter V	- External Intervention	86
Chapter VI	- Conclusion and Implications	111
Technical Appendix I:	Research Framework	A-1
Technical Appendix II:	Study Design	A-21
Bibliography		B-1

This study of selected developing colleges and universities was undertaken for the United States Office of Education, Office of Planning, Budgeting, and Evaluation under contract number 41-676-7040-2. The study was conducted by Edward P. St. John, a researcher at Harvard University Graduate School of Education, in close collaboration with George B. Weathersby, who served as principal investigator. The purpose of the study was to refine an institutional development model that has direct implications for Title III of the Higher Education Act of 1965.

Reports prepared under this contract are listed below and copies can be obtained from the USOE-OPBE (Room 4087, 400 Maryland Avenue, S.W., Washington, D.C. 20202) or from George B. Weathersby (c/o Indiana Commission of Higher Education, 143 West Market Street, Indianapolis, Indiana 46204). Special thanks is extended to our typists, Mary Sanderson, Connie Tuton, and Careyleah MacLeod.

Final Report

"Structure, Management, and Intervention"

Case Studies

I. "Doane College, Crete, Nebraska"

II. "St. Mary's Junior College, Minneapolis, Minnesota"

III. "Xavier University of Louisiana, New Orleans, Louisiana"

IV. "North Carolina Agricultural and Technical State University, Greensboro, North Carolina"

V. "Valencia Community College, Orlando, Florida"

EXECUTIVE SUMMARY

Title III of the Higher Education Act, the "developing institutions" program, is the largest direct institutional aid program for colleges and universities in the federal budget. Although the program has funded a diverse range of institutional projects and activities, the rhetoric used to advocate the program during the past decade has been almost entirely about structural development. Advocates have argued that Title III funds would help colleges and universities reach a developed state in which federal funding would no longer be required for survival. Unfortunately, the program has lacked an institutional development model that could be used as a basis of evaluations of the Title III program.

This pilot study has proposed and tested an institutional development model that could be used to improve the funding process and as a basis for future studies of the effects of the program. The proposed model focuses primarily on the development of institutional management systems. Although we recognize that the Title III program is designed to improve a broad range of institutional activities, it is improvements in the management area that will probably help institutions reach a state of self sufficiency in the current era of financial and political stress in higher education. This study has used a broad concept of management that incorporates all aspects of institutional development funded by Title III. The model proposes five different phases of structural development with correspondingly different management systems.

The study utilizes case studies of five colleges and universities funded by the Advanced Institutional Development Program (AIDP) to test the proposed model. AIDP gives institutions large grants, usually of $1 million to $3 million, to undertake intensive three- to five-year development processes. Institutions selected for case study were considered exemplary by U.S.O.E. Title III program staff for their overall use of Title III funds and for their management effectiveness. We felt exemplary institutions would provide the best possible examples to test a general model of institutional development that emphasizes structural development and management effectiveness.

Our basic conclusions from the analysis of these case studies are:

> A four-phase sequence of structural development was identified for colleges and universities. It distinguishes between institutions based on their complexity, with the less complex institutions being in the initial phases and the more complex institutions in the more advanced phases.
>
> Different management systems were associated with each phase of development. More sophisticated management systems were needed by institutions in the more advanced phases. In addition, it appears that complex insitutions with underdeveloped management systems need to address the management needs associated with prior developmental phases in addition to those associated with their actual phase of structural development.

Based on these findings and an analysis of the AIDP pro-

jects at the case institutions, it was possible to suggest plateaus of development for the planning, management, evaluation, and inquiring systems for institutions in each developmental phase. In addition, we found that the appropriateness of the overall change strategy used by institutions in their institutional development efforts varied according to developmental phases, as well.

CHAPTER I

INTRODUCTION

Today colleges and universities face a drastically different set of conditions than ever before. After three centuries of relatively constant growth, during which the prospect of future growth was always present, higher-education institutions now face the prospect of declining enrollments. In addition, in the late 1960s and early 1970s financial and political crises emerged in higher education nationally; crises that appear to be permanent, thus causing a condition of continued financial and political stress for most colleges and universities, even the most prestigious. In this setting, new state- and federal-policy issues have emerged concerning the most basic issues of institutional survival.

This study addresses the questions of institutional survival and development by examining the ways different institutions organize programs, activities, and management to operate more effectively and, hopefully, to enhance their prospects for survival. Although the problems facing colleges and universities are complex--more complex than any single researcher can either document or answer--there are reasons to be hopeful. New frameworks are needed for viewing these problems. In this study I propose and develop a framework for viewing the institutional development problems facing higher-education institutions and the adjustments they are making to deal with both changing enrollment patterns and increasing financial stress. Colleges and universities, like most other social institutions and human organizations, have a capability for learning and an instinct for survival. The purpose of this study is to develop a framework for planning for institutional survival, for developing effective institutional management systems, and for designing strategies for institutional change and development.

Three themes of institutional change have emerged during this investigation: structural development, management effectiveness, and external intervention. Each is a separate, yet interrelated concept of institutional change that is present in much of the literature on institutional development and in most institutional- and governmental-change strategies. Before discussing the research, I will briefly comment on these themes and consider their implications for the theory and practice of institutional vitality in higher education.

Structural Development

During the past centuries higher education has experienced several drastic transformations in its growth and structural development. An examination of this transformation, a subject not covered in this study, shows that there have been several distinctly different periods of structural development in the history of higher education in this country.*

The United States has been very successful in evolving elaborate and complex systems of higher education. At first, prior to the Revolutionary War, the founding of colleges was the predominant goal, and until the Civil War, most colleges were small. Many have remained small; some of our oldest institutions are the smallest and least complex. As the years, decedes, and centuries passed, a greater sophistication at organizing higher education emerged. The founding of colleges was followed by the creation of universities, the creation of large multi-purpose, multi-function universities, and finally, by the creation of multi-campus university and statewide college systems.

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*For a history of the growth and development of the American higher-education system, see Jencks and Reisman (1968).

Today the American higher-education system is complex and diversified with many institutions having a great diversity in their organization, purpose, and structure. Historically, the emphasis in higher-education policy was usually on structural development, on increasing the number and size of institutions. The primary national concern, from the founding of the country forward, and in the several colonies prior to the Revolution, was on creating institutions and later on enlarging institutions to accommodate to ever-increasing demands. At first the demand was for more educated person-power; later it shifted to social demands for equality of educational opportunity and, finally, to a concept of mass-consumption and of universal access to higher education. In the process of developing and of creating larger systems that could serve more people, little emphasis was placed on the improvement of the management capacity within these institutions.

Management Effectiveness

Management effectiveness is a relatively new concern in higher-education policy. As the emphasis on state and national policies toward higher education gradually shifts from growth and development to survival and maintenance, the emphasis placed on higher-education management will increase. During the past ten years, higher-education management has become a "booming" industry, with a number of new public and private consulting firms and state and federal agencies designed to improve college and university management. Certainly there has been some concern about management and efficiency in higher education in the past, but the degree of this concern has been small. Now, as the demand for more management expertise has increased, experts from other fields are applying their expertise to higher education.

The state-of-the-art of management development in higher education is not very sophisticated; in fact, it can be described as an emerging field. Sophistication about management development has lagged far behind sophistication about structural development; we know more about how to create new systems than about how to manage those systems we now have. Research indicates that even the most prestigious and most complex institutions now face management difficulties. In the present context, as more emphasis is placed on management development, there is an inherent danger of overdevelopment; colleges and universities may try to implement management systems that are beyond their needs and that perhaps create an added drain on already dwindling resources.

There are currently few agreed-upon definitions or measures of management effectiveness, despite a near universal agreement that better management is needed. In this study, I have utilized a relatively simple definition: a college or university is effectively managed if its management system is capable of addressing its management deficiencies. Based on this definition, I have experimented with different ways of measuring management effectiveness to advance in a small way the state-of-knowledge in this area. This definition of management effectiveness is dependent on knowledge of how colleges and universities develop structurally because more complex institutions have greater management needs than less complex institutions. Thus effective management will vary for institutions with different structures.

External Intervention

As the focus of government policy shifts from structural to management development, there may be an increased emphasis on external interventions. Already there have been a number of local-, state-, federal-, and foundation-sponsored programs designed to intervene in the development process of struggling colleges and universities. This study focuses on one such program, Title III of the Higher Education Act, although its findings and conclusions have broader implications. The institutions used as case studies are funded in Title III's Advanced Program; they have also received financial support from other private and public development programs.

Title III has a relatively long history. For over ten years it has been trying to improve the plight of struggling colleges and universities. At times this appears to be an uphill battle; the number of institutions encountering difficulties has increased during this period. The demands for the program's funds and the amount of funds available to the program have increased steadily. During its thirteen year history, the Title III program's emphasis has gradually shifted from increasing the size of struggling institutions to increasing their management effectiveness. This is not a study of the Title III program per se however, but rather of its impact upon the institutional development process, on the managements systems in these institutions. and upon their prospects for survival.

As is already evident from this brief discussion, these three concepts--structural development, management effectiveness, and external intervention--are interrelated, especially when the broader concept of institutional development in higher education is considered. To view college and university organizations as institutions is to analyze them within their social and political settings.* In this study I make use of the literature on organizations and management to develop a framework for viewing these interrelationships and for proposing strategies for intervening in the institutional development process. The focus of this investigation is on the ways in which an intervention program can be designed to narrow the gap between the state-of-structural development and the state-of-management development at a given institution.

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* Parsons (1960) defines an institution as an organization considered in its social and political setting.

The Title III Program

The Developing Institutions Program, Title III of the Higher Education Act of 1965, is the only federal program aimed at institutional development. Its present annual appropriation, $120 million in FY 1977, comprises the largest program of direct institutional aid within the federal budget. The legislative history of Title III (Jacobs and Tingley, 1977) illustrates both the conflicting goals of the program and the continuing refinement of the program's eligibility criteria.

On the one hand, Title III seems to be designed to increase the resources and activities of eligible developing institutions. The eligibility criteria for the program stress quantitative concerns, such as the number of students, library volumes, and faculty with doctorates. Originally the criteria were given as separate standards for each institutional type--two-year public, two-year private, four-year public, and four-year private--above which and below which institutions were ineligible for funds. More recently these criteria have been presented as percentiles representing the minimum and maximum ranges of eligibility. Thus, it seems that the program was designed in part to facilitate improvement along these quantitative lines, while encouraging institutions to stay within the eligibility range.

On the other hand, many of the arguments used to justify Title III by the program staff and institutional representatives in legislative hearings over the years have stressed that Title III funds could be used to facilitate a development sequence for higher-education institutions and that Title III-funded institutions would experience an "up and out" phenomena as they progressed along this sequence toward a developed state. In fact, slightly over five years ago an advanced institutional development program (AIDP) was designed and funded, which gave large grants of up to $3 million over a three- to five-year period to institutions to facilitate an intensive development effort. The five-year maximum eligibility for this program was suspended last year, before any institutions had been in the program for five years.

Over time, as the eligibility criteria for the program have become more specific and the arguments for a developmental sequence more vocal, a set of conflicting expectations have emerged on the part of the legislature and program staff. Institutions that meet the criteria tend to perceive Title III as an entitlement; yet the providers of funds, legislators and program staff, often expect the Title III program to produce a set of "developed" institutions.

Our recently completed study of Title III (Weathersby, Jackson, Jacobs, St. John, and Tingley, 1977) also suggests that a developmental approach is needed for the evaluation of Title III. We considered four possible approaches to the evaluation of federal aid programs:

> (1) the structural development of colleges and universities;
> (2) the levels of various collegiate activities such as the number of students, faculty, library volumes, or terminal degree recipients on the faculty;
> (3) the relative efficiency with which colleges and universities provide instruction and, where appropriate, public service and research; and
> (4) the determinants of student demand with a special focus on those institutional actions which affect individuals' college going choices. (p. 1)

Two of these areas have a direct impact on this discussion. Although alternative sequences of development could be proposed, and perhaps this type of intervention makes the most sense for public policy, existing data sources did not allow for testing of developmental concepts (see Weathersby et al., 1977, and also St. John and Weathersby, 1977). Regarding activity indicators, we found that, although activity indicators may be a useful means of measuring program impact, they do not distinguish well between funded and non-funded applicant institutions, except for institutions funded in the advanced program; and even when differences can be identified, funded institutions do not appear to change faster than non-funded institutions (St. John, Tingley, and Gallos, 1977). One conclusion from this investigation was:

> While we attempted to describe what is discernible from existing quantitative data bearing on the four areas of important concern to the Title III program, it has become increasingly clear to us that the most significant data either have not been collected or, if collected, have not been made available coherently. In the area of patterns of institutional development in particular, the available data do not speak at all to the types of measures we have suggested. We believe the measures we have suggested should be pilot tested and refined for a limited number of institutions. If they prove to effectively identify the various patterns of institutional development experienced by these pilot institutions, a more substantial effort could be mounted to determine the patterns of institutional development experienced by institutions in general. (Weathersby et al., 1977, p. 44)

This incremental approach to generating and testing developmental theories would have the greatest possible benefit to Title III and to institutions in general. This study attempts to do this by examining the ways five institutions funded in the Advanced Institutional Development Program (AIDP) have gone about this task.

The Advanced Institutional Development Program (AIDP) gives large grants, usually of $1 million to $3 million, to colleges and universities to undertake intensive institutional development projects. AIDP emphasizes three aspects of the institutional development process: curriculum development, improvement of student services, and management development. This study develops and tests a developmental model that has the most direct implications for the management development component of these projects. The five institutions used for case studies were:

--Doane College, a small liberal-arts college in Crete, Nebraska;

--St. Mary's Junior College, a small technically oriented junior college in Minneapolis, Minnesota;

--Xavier University of Louisiana, a medium-sized, historically Black university in New Orleans;

--North Carolina Agricultural and Technical State University, an historically Black land-grant univeristy in Greensboro; and

--Valencia Community College, a three-campus community-college system in Orlando, Florida.

These case studies, which are seperate appendices, provide the data base used for testing the general model of institutional development proposed in this study. These institutions were selected from a list of exemplary institutions identified by the AIDP Washington, D.C. staff. Exemplary institutions were used because they provide the best models to test the relationship between structural development and mangement effectiveness. A full discussion of the methodology used for this study is included in the technical appendix.

There are seven remaining chapters in this study. Chapter II proposes a general model of institutional development and the framework used to analyze the case studies. Chapter III analyzes the case studies according to the structural development model proposed. Chapter IV considers the types of management systems that seem appropriate for institutions with different types of organizational structures. Chapter V deals with the role of external funding agencies in the institutional development process. Finally, Chapter VI, the concluding chapter, summarizes the results of the investigation and draws implications for institutions, for funding agencies, and for future research.

CHAPTER II

TOWARD A MODEL OF STRUCTURAL DEVELOPMENT, MANAGEMENT EFFECTIVENESS, AND EXTERNAL INTERVENTION

Because of the diversity of institutions--in terms of their structures, missions, technologies, students, and management histories--no single management solution will work for all institutions. Of the three alternative theories of institutional development explored previously (St. John and Weathersby, 1977), the structural development paradigm offers the most possibilities for the development of a model that can differentiate between institutions with different management needs. This chapter outlines the model of structural development and management effectiveness used as the conceptual basis for the development and analysis of the case studies. However, before discussing this general model of institutional development, I will mention some of the important cautions about the application of developmental theories in general and of this theory in particular.

First, development theories do not suggest a "cookbook" approach to solving institutional problems and do not provide specific solutions for each crisis. Instead, most developmental theorists view all organizations as unique in one way or another. These theories do suggests, however, that there are predictable types of problems facing all organizations as a result of their history. Sarason (1972), for example, addresses this problem when discussing the development of new, creative organizations: "The fact that things develop in a certain way is not synonymous with the statement that things must develop in a certain way, as if nothing can stop or alter the process" (p. 69). For research on the structural development of colleges, this first caution suggests that it is possible to generate a general sequence that predicts crises of a general nature, although there may be a variety of particular solutions for a given organization at a given point in time.

A second caveat, when applying a theory of structural development Greiner-type model adopted here, is that most of these theories are growth-related. Greiner's theory (1972) does, in fact, suggest phases of development that are related to organizational growth, and that changes in management practice are tied to structural changes that result from organizational growth. Even though higher education is entering a slowed or no-growth era, this theory is still applicable, because institutional management is now a more important issue in higher education than it has been in the past. And a theory that actually suggests the general types of management practice that may be appropriate for different institutions is potentially useful. This theory not only can be used to suggest the next predictable crisis, but it also can be used to suggest the appropriate type of management--although not the specific practices--for institutions in a given phase of development. In this application of the Greiner model, future growth is less important than finding ways of attaining congruence between an institution's phase of structural development and its management system.

Third, few structural development theories are specific to higher-education institutions. In the case of Greiner's theory, it is based on the study of business organizations. Although there is some evidence to suggest there are similarities between business organizations and education organizations, education organization are subject to differnt pressures and their characteristics are considerably different. An application of Greiner's theory by Weathersby and myself is used as the conceptual model for this investigation. The general sequence, as applied to higher education, seems to depict accurately the development of colleges described in the historical literature. The model will have to be modified to depict accurately the actual management development needed by higher-education institutions. For example, Greiner suggests that a directive management style is required for success in the second phase, a style of management that probably would not work in higher education due to the historical autonomy of faculty. Nevertheless a new college, entering the second phase of development, does need some individual with the authority to make key decisions and to speak for the institution in crisis situations.

Finally, most developmental theories use a narrow organizational paradigm. Greiner's theory relates specifically to the structure and management of organizations and does not necessarily take into account the technological and interpersonal factors raised in the other theories considered previously (St. John and Weathersby, 1977). It also does not directly take into account influences from the external environment. In higher education, the external environment is probably now the most pervasive influence facing the development of

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colleges. When applying a theory of structural development to colleges, it whould be done from a broad concept of organization that accounts for these other influences. The research framework utilized in this study, which is outlined in Appendix I, is based on such a model.

The Model

The basic model used here is an adaptation on the Greiner theory of organizational development. The model focuses on the relationship between changes in the structural characteristics of institutions and corresponding changes in management needs. The research framework takes into account other aspects of the institutional development process, such as changes in technologies and interpersonal processes, although its primary focus is on this relationship. The model suggests a dynamic relationship between a college's administrative structure, management system, and predomirate managerial crisis. This relationship is illustrated in Table II-A. Accordingly, the developmental phases can be described as follows.

During the initial formation period, a college is planned, the staff is hired, and the student market is developed. A defined administrative structure has not yet emerged and decisions are usually made informally. It is possible for an institution to remain in this phase of development for a long period, especially if it remains relatively small and no external pressures force the institution to develop a more defined administrative structure and a long-range planning capacity. Most institutions, however, progress beyond this phase relatively rapidly.

Table II-A

Phases of Structural Development and Corresponding Management Systems

Phase	Administrative Structure	Management System	Crisis
I Creation	Formation of new college, small administrative staff and faculty, student market developed	Informal collaborative management system, decisions made informally	Leadership Crises: need for more defined authority structure
II Direction	Centralized administrative structure develops for administrative and academic decisions, functional subunits (departments, colleges, etc.) emerge	A few key individuals take responsibility for most systemwide decisions and for initiating new programs	Autonomy Crises: member of organizational subunits need more authority
III Delegation	A differentiated organizational structure emerges with delegation of decision authority to numerous functional subunits	Delegated management system emerges, functional subunits responsible for management in particular areas	Control Crises: lack of policy and procedure coordination

-continued-

Table II-A, continued

Phase	Administrative Structure	Management Sytsem	Crisis
IV Coordination	A more complex organizational structure, system-wide administrative service units policy formulation becomes separate function	System-wide administration becomes more active, policies and procedures more regularized across functional subunits, policy formulation becomes a separate system-wide activity	Red Tape Crises: conflict over regulations and procedures
V Collaboration	An integrated or matrix structure emerges, integration of system-wide administrative and functional subunits	A more collaborative approach to policy formulation and implementation, system-wide administration and functional subunits representatives work in teams on policy formulation and implementation	Unknown

Sources: Adapted from Greiner (1973) and St. John and Weathersby (1977).

If a college is successful in implementing academic programs and in securing students, it may become necessary for someone to speak for the organization and to take responsibility for development of new programs and for the maintenance of existing programs. Such an organization must install a defined administrative structure with a capacity for maintaining existing programs and for developing a long-range planning capacity.

For colleges that successfully install formal administrative structures and that continue to grow, perhaps through the addition of new programs, a crisis of autonomy will result. During this period, members of the organization will demand more responsibility in their areas of expertise and the administration will need to develop a system to ensure accountability. A more functionally-differentiated administrative structure and delegated management system are needed. In a phase III structure, authority for many operational decisions, academic and administrative, are delegated from a few top administrators to a larger number of individuals in key positions throughout the organization.

Colleges that continue to grow in the delegated phase, perhaps through the addition of new schools at an existing campus or through adding new campuses to a multi-campus system, may face a coordination crisis. These institutions need a centralized planning and research capacity to coordinate among the various organizational subunits. Many services offered in individual functional subunits can also be handled more efficiently through centralized units for administration and student and academic services.

Institutions that successfully grow in a coordinated phase may face a red-tape or political crisis. In the next phase, which is still largely conjecture in higher education, procedures would be established, perhaps through matrix management or the use of task groups, which allow members of functional subunits and central administrative units to collaborate on new projects. For example, rather than develop a new state-wide external degree program in a particular state, existing institutions might collaborate on a method of accomplishing this objective by using existing personnel and facilities. This would entail less additional financial expenditure than the development of an entirely new system.

When continued growth was likely, most institutions could expect to develop structurally as well as to grow. In a non-growth era, however, this model is particularly useful in differentiating between campuses with different management needs. It suggests that an effectively managed institution would have a management system compatible with its phase of structural development.

Potentially, an external intervention program, like Title III, could use a model of this nature as a basis for assisting institutions in the development process by helping them to attain a balance between their phases of structural development and their management systems. Some campuses will need more sophisticated management systems, while others, perhaps those adjusting to declining enrollments and program retrenchment, will need to streamline their existing administrative structures and, perhaps, simplify their management systems.

The purposes of the institutional case studies are to test the institutional development model and to consider its relevance for public and institutional policy. There are numerous state, federal, and private (philanthropic, non-profit, and profit) programs now underway that are designed as interventions to improve campus management. To be relevant to public policy, therefore, an institutional development model should consider the types of intervention strategies that are useful for particular types of institutions facing particular sets of organizational problems. Management effectiveness and intervention effectiveness are most appropriately considered within the context of the institution, rather than being considered solely from a predefined set of policy objectives. If the objectives of the intervention have no relevance to the institution's management needs, then the intervention is likely to fail.

The general model used in this study assumes an interaction bebetween the formal structure of a college, its management system, and the external environment. In actual fact, the institutional development process is a dynamic one that is difficult to separate into distinct phases. Nevertheless, a developmental scheme, even a tentative one, is a desirable framework for external interventions. If developed adequately, such a framework can provide a general guide for planning institutional-development strategies.

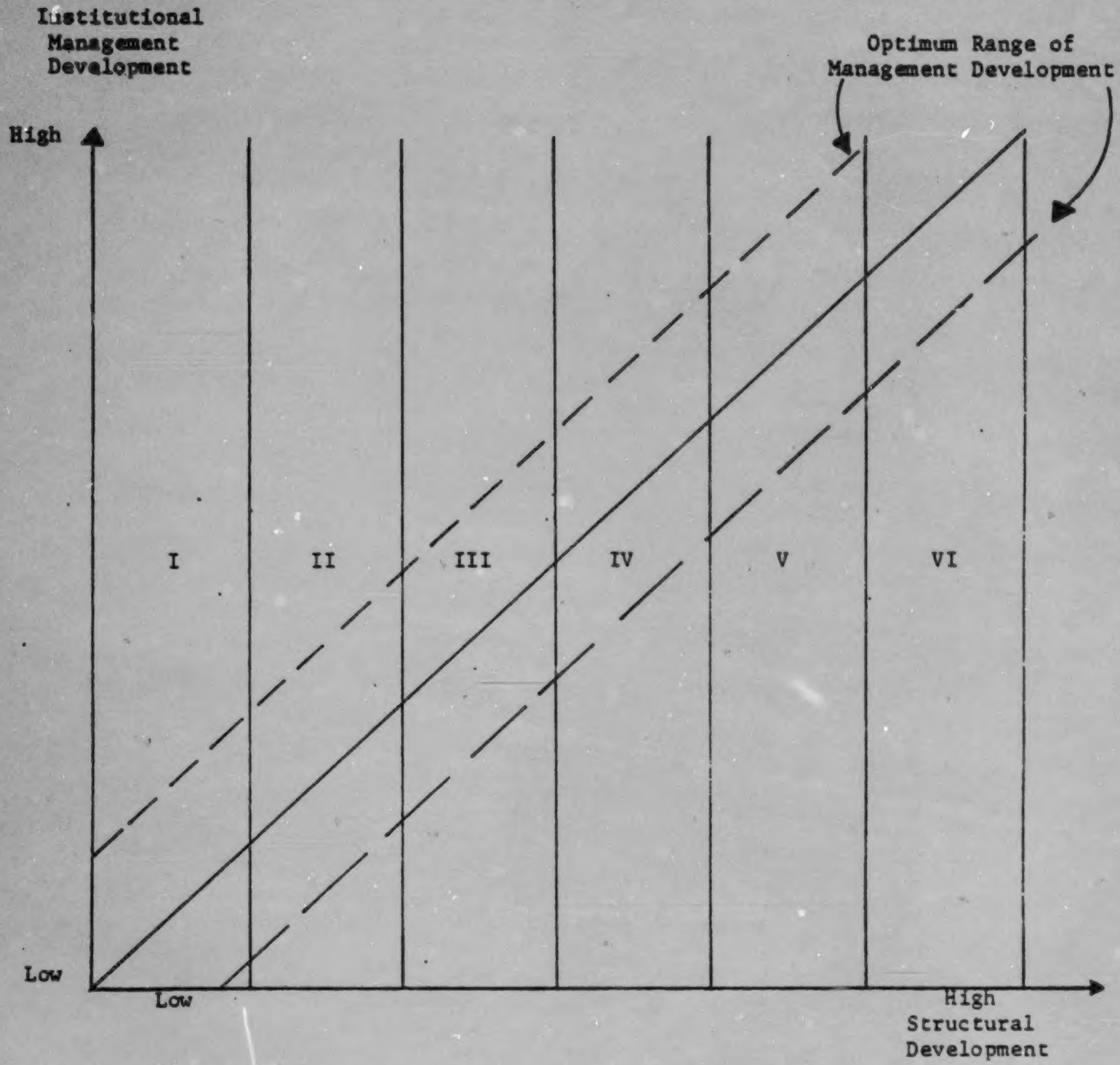
Structure, Management, and Intervention

The structural development of colleges can be viewed as a continuum from the undeveloped to the highly developed. When compared with each other, colleges' formal structures will fall in different places along a continuum. The five-phase model described in this chapter provides one conceptual map for distinguishing between colleges with different structures, or for categorizing institutions into different places along this continuum. This model also assumes that as colleges develop structurally, as they become more complex, their management needs increase. Figure II-A presents one scheme for plotting the relationship between management needs and structural development. Accordingly, to be effectively managed, a college must attain a balance between its relative place on the structural development continuum, or its developmental phase, and the type of management system it uses. This schema helps explain why a management system that is effective at one point in the life of an organization is not effective at another point: as an institution develops structurally, its management needs increase.

Environmental influences are a significant factor in the structural development of colleges. Structural development can be viewed as a combination of increasing size and of increasing complexity; as an institution grows it will eventually need to install a more sophisticated organizational structure. External factors can force a college to install a new structure in order to be more efficient; they can also force it to stay the same in spite of a need for change. For

Figure II-A

Structural Development and Management Effectiveness


Institutional
Management
Development
Optimum Range of
Management Development
High
Low
I
II
III
IV
V
VI
Low
High
Structural
Development

public institutions, new structural developments might be the result of actions taken by state legislators, while for private institutions it might be an internal response to increasing financial problems. Thus, according to this general model, an institution may experience growth in one phase until it becomes too inefficient or outdated, and then it will have to install a new structure and, therefore, will experience additional management needs.

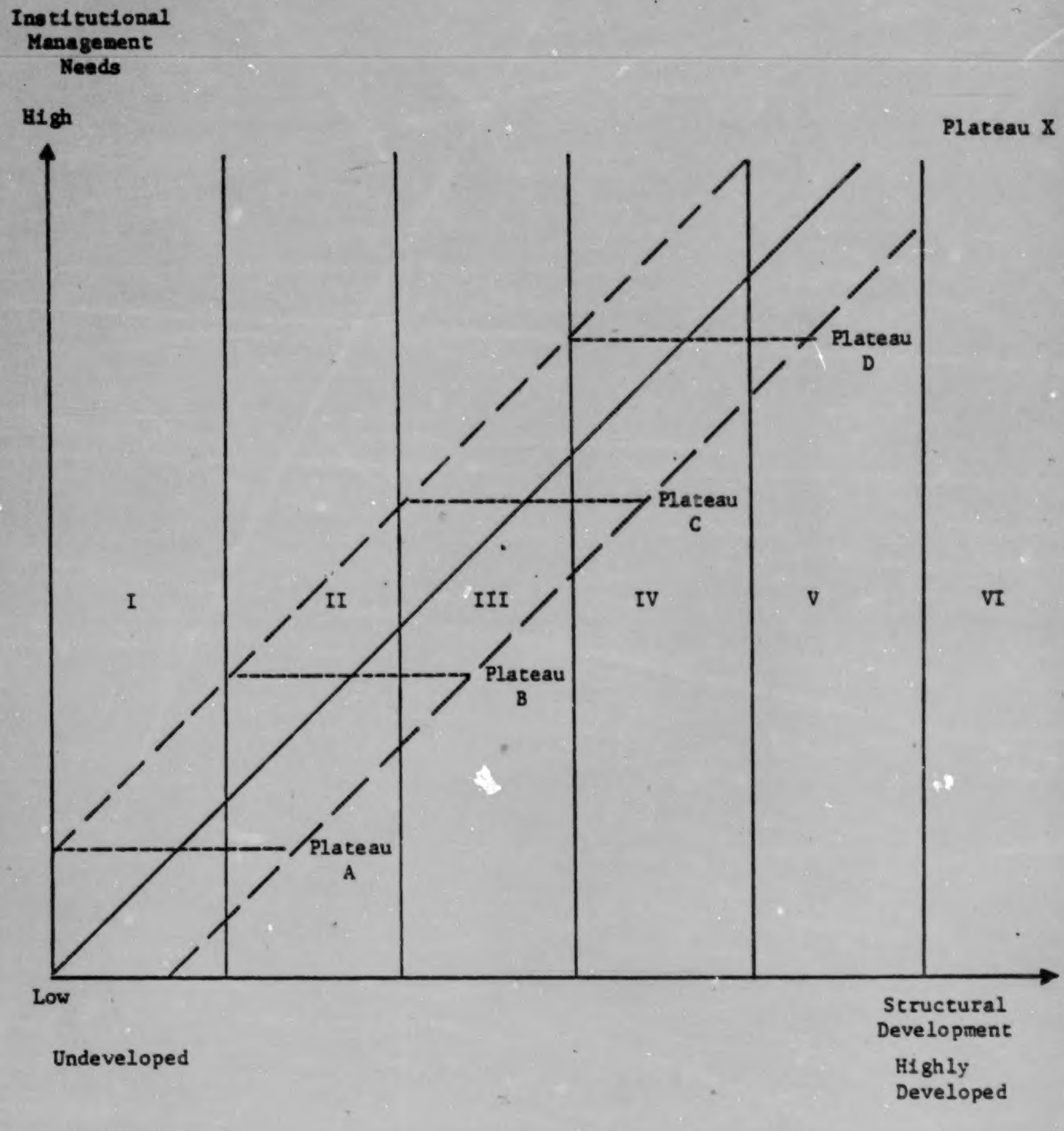
In practice this relationship is not always clear-cut and there are exceptions, especially in those instances where colleges have not faced external pressures to change. Harvard University is an example of an institution that has grown in size during the past several decades but has not faced pressure to install a more complex organizational structure. Harvard enjoys large endowments and high demands for its services and therefore has not encountered the few incentives to be efficient that most colleges have faced. Its structure is in some ways analogous to a dinosaur in the modern era; it is an organization that seems too large to operate successfully with its delegated structure in a time of financial stress. Although Harvard has added new schools and institutes, its organizing philosophy of each tub on its own bottom has not changed, it operates successfully as a highly delegated structure with little coordination between colleges, schools, and institutes. In practice not many colleges enjoy the financial success of Harvard, and therefore most institutions that have become as complex as Harvard have installed more coordinated structures. Baldridge's (1971) study of New York University, another large-complex private institution, documents the transition to a coordinated structure. Two of the colleges used as case studies, North Carolina A & T and Valencia Community College, both smaller than Harvard, are responding to the need for increased coordination.

Historically, there have been fewer incentives for colleges to develop effective management systems than there have been for them to develop structurally. Structural innovations—the development of graduate programs and research capacities, the development of multi-college universities, and the development of multi-campus systems—have been widely accepted and readily adapted; structural advancements allow for increased growth. There have been fewer incentives for institutions to develop management systems that are compatible with the structures that have evolved. As a result, most colleges have operated below their optimum management capacity.

The developmental approach can provide a framework for external interventions designed to improve the effectiveness of college and university management systems. Rather than assert one prototype of an effectively managed institution, something which is too often the case due to a poor understanding of institutional dynamics, the developmental approach assumes different plateaus of management effectiveness are appropriate for institutions in different developmental phases. This relationship is illustrated in Figure II-B. Plateau X represents the state of the art in management-system development. It is easy to understand why external funding agencies might assume that all institutions should develop to this point. Although it may be true that phase V institutions need the most sophisticated management

Figure II-B

Model for External Interventions


Institutional Management Needs
High
Plateau X
Plateau D
Plateau C
Plateau B
Plateau A
I
II
III
IV
V
VI
Low
Structural Development
Undeveloped
Highly Developed

techniques, these same techniques may be grossly inappropriate for institutions in prior developmental phases. The concomitant to reduced growth is that increased structural development is also less likely. Thus Plateau X is probably far more sophisticated than most institutions will ever need.

A developmental framework for external interventions would set expectations that are relative to the structure and capacity of the institution. Figure II-B illustrates these relationships: Plateau A is more appropriate for phase I organizations, Plateau B for phase II organizations, and so forth. If the developmental approach is taken seriously, however, measures and methods for determining developmental phases and for determining the appropriate types of management systems for institutions in different developmental phases are needed.

A three-leveled approach is used for the analysis of the case studies. First, institutional profiles are analyzed to determine if a general sequence of structural development can be identified. Second, the relationship between the structural development and management needs and effectiveness is analyzed. Finally, the types of development and intervention strategies that appear most useful for institutions in different developmental phases are considered.

In the analysis of structural development, the primary concerns are whether or not a general sequence of development can be developed, and if so, whether a set of measures can be identified that can be used to identify these phases. This relies on the structural histories and descriptions of the current structural development at the case institutions. Generalizations about structural development patterns take into account variations in other institutional subsystems, including technological developments and interpersonal systems, in addition to variations in structures. Determination of a structural sequence and identification of variables to identify developmental phases are closely-related tasks.

The second level of analysis is the consideration of the relationship between structural development and management effectiveness. This involves a comparison of the management systems used by institutions in each developmental phase. Similarities and differences between the management systems used by the set of institutions in each phase are used to explore both the impact of structural development on institutional management needs and the developmental nature of institutional management needs. For instance, based on the proposed model at the start of this chapter, it can be hypothesized that an institution in a phase I-phase II transition would need to develop a long-range planning capacity; that an institution in a phase II-phase III transition would need to maintain and improve its planning capacity but in addition would need to develop standardized administrative procedures and a method of decentralizing goal setting and program management; and that an institution in a phase III-phase IV transition would need to develop a capacity to coordinate a diversified organization structure in addition to the management practices already mentioned. In Chapter VI these basic relationships are examined by comparing institutions in different developmental phases.

The third level of analysis assesses the impact of management interventions on the case institutions to determine if a systematic approach to management intervention is viable and feasible in higher education. The institutions studied are funded in the advanced program of the developing institutions program, which has a standard set of management practices that each funded institution must include in its proposal. These include a planning, management, evaluation system (PME), management information system (MIS), and transactional information system (TIS). If the developmental model outlined here proves accurate, it might help explain why some of these practices work better in some institutions than in others. For example, the planning component of the PME might be most relevant to an institution that is making a phase I-phase II transition, while the TIS might be most relevant to the needs of a campus that is making a phase III-phase IV transition. While the former institution would be developing its first long-range planning capacity and thus be able to make use of a formal planning procedure, the latter institution would be able to use a standardized information system in its efforts to develop a more coordinated management system.

One does not have to follow the developmental logic too far to realize that standardized interventions, the development of a particular set of management practices at all institutions, may not be the most appropriate policy for a government- or foundation-funded intervention program designed to improve management effectiveness. Although initially it might make perfect sense to encourage all institutions to develop the most sophisticated management techniques, on closer examination these techniques may not be needed by most campuses and could possibly even be a hindrance to a campus left to support these practices financially after the completion of an intervention program. The most typical problem of this type is the assumption that all institutions need coordinated-computerized information systems. These information needs will be the greatest at institutions in need of coordinated management. At a smaller campus these practices may not be needed.

Since the early 1960s, the federal government has initiated funding programs designed to facilitate the development and change of social institutions: public schools, cities, and colleges. It is easy to judge these programs, like model cities or the developing institutions programs, as failures when policy objectives have not been met or when federal funds appear to be poorly used. Intervention programs should take into account the types of changes likely to be successful for institutions with particular characteristics when intervention strategies are designed. This is an effort to develop a model that accounts for institutional differences in the design of interventions.

CHAPTER III

STRUCTURAL DEVELOPMENT

The structural development of colleges and universities is a dynamic process. A variety of internal and external factors influence the fate of institutions, a fact well-illustrated by the case studies. In spite of these differences, there appears to be a general pattern of structural development.

The institutional case studies illustrate the wide range of environmental factors that influence the structural development of colleges: legislative acts, financial stress, shifts in demend, changes in enrollment patterns, and so forth. Legislative acts were particularly important to the two public institutions studied, Valencia Community College and North Carolina A & T, which depend on state financial support and state authorization to award different degree levels (two-year, four-year, graduate). Legislation also appears important to the private institutions studied; two private colleges received some state support while the other could use it. Shifts in consumer demands in recent years influenced the institutions differently: the decreasing student demand for traditional liberal-arts education has influenced changes at Doane College and Xavier University; increasing demand for technical education has positively influenced St. Mary's Junior College, North Carolina A & T, and Valencia Community College. The changing enrollment patterns, including the increasing enrollment of Blacks in predominantly White institutions and the increasing proportion of students attending public institutions, have had significant impact on all of these institutions.

Internal characteristics may be a more subtle influence on the development process, but they are powerful nonetheless. Doane College underwent a subtle change in its mission when it developed a career emphasis to complement its liberal-arts orientation; this change brought new life to the institution. The addition of the career education component, coupled with the development of a long-range planning capacity, necessitated by financial stress, catapulted the college into a structurally more complex organizational phase. Although in most instances they have been less dramatic, changes in internal characteristics, the addition of new programs and the like, have influenced the structural development of the case institutions.

In spite of these differences--the variation in external forces for change and in the internal changes that make structural development possible--discernible patterns of structural development are apparent in the case studies. Structural development seems to be less a result of age than of size and complexity. One of the youngest and one of the oldest institutions studied, St. Mary's and Doane, respectively, have made a similar structural transition in the past few years. Both are committed to remaining small--one by choice, the other by default--but both have had to install more sophisticated and formal organization structures in spite of this commitment. As these institutions have started to plan more seriously for the future, they have made subtle changes in their structures.

This chapter focuses on the structural development of the case institutions; it analyzes their developmental patterns and suggests a tentative set of measures to use to predict developmental phases. Although these measures are speculative, and need to be the subject of more investigation and modification, they are a useful starting point for an institutional development framework.

Developmental Analysis

Earlier chapters have speculated about alternative theories of institutional development and suggested one that might be used as a model to improve the management effectiveness of colleges. This model describes development as a phased process: a sequential series of structural transitions that have implications for institutional management systems. The case studies indicate that transitions of this nature do exist, but that they may not be as clear-cut as the theory suggests.

Within the case studies there are examples of four of the five phases described by the theory. Examples of phase I institutions include: St. Mary's Junior College and Doane College, both of which have recently transitioned to phase II; and the Open and East Campuses of Valencia Community College. Examples of the direction phase, phase II, include: St. Mary's and Doane, which appear to have recently entered this phase, and Xavier University of Louisiana, which has transitioned to a more complex phase. Phase III institutions include: Xavier University, the West Campus of Valencia Community College, and North Carolina A & T, which is transitioning to phase IV.

Examples of phase IV institutions include: North Carolina A & T, which appears to be entering this phase, and Valencia Community College. From these examples it is possible to piece together a descriptive model and to suggest general measures of structural development.

The five case studies were arranged in order from least- to most-complex institution. In this analysis, these same institutions will be discussed in relation to the general model described at the start of this study. What follows then is a phase-by-phase analysis of the case institutions according to this model.

Phase I: Creation. Creation phase organizations are typified by relatively little structural development, a small administrative staff and faculty, and an orientation toward the development of new academic programs as their primary administrative activity. The case studies provide four distinct examples of institutions that are in or that have recently passed through this phase.

The two new campuses of Valencia Community College, East Campus and Open Campus, provide the clearest examples of this developmental phase. Both are clearly within this phase, although both have shown signs of continued development and growth and, therefore, may soon transition to a more directed phase. St. Mary's Junior College and Doane College provide examples of institutions that have recently transitioned out of this phase.

VCC East Campus is the youngest of the institutions represented in this developmental phase. It has a three-year history, dating back to the appointment of Dr. Evans as Provost. During his first year as Provost, Evans planned the new campus by involving people from other programs within Valencia C.C. in the planning process, traveling to other campuses to get workable ideas about what could be implemented at the new campus, and bringing experts from off campus to Valencia to share their ideas about what the new institution might become. During the first year the college operated with a small faculty, twenty-seven volunteers and draftees from the larger campus, and a small administration, consisting of Evans, Dr. Beale, who is the Dean for Student and Academic Affairs, and a few assistants under Dr. Beale. The campus administration has not evolved beyond this point, although it should be noted that many of the administrative affairs of the college are handled by the college-wide administration.

The academic structure at East Campus remains relatively unencumbered by departments and divisions. The administrators and faculty maintain an image of East Campus as an innovative institution and have resisted the creation of a structured environment. However, there has been a gradual movement toward more formalization in the academic structure in spite of this resistance. During the first two years, the faculty were organized into two loosely-structured divisions for administrative purposes. Faculty were not divided into divisions by disciplines; when two or more faculty from one area were associated with the campus, a representative would be included in both divisions. Chairpersons of these administrative divisions were elected by the faculty. In 1977-78 there will be a few changes in this structure:

faculty will be divided into two divisions according to disciplines and chairpeople will hold administrative appointments. Due to the growth and to the increased administrative responsibilities of the chairpeople of these divisions, some initial formalization was needed.

The Open Campus of Valencia C.C. also has a three-year history, although many of its programs have earlier origins. The Open Campus was formed in 1974, when Valencia Community College became multicampus. The continuing, recurrent, and community-education programs run by the college were moved into a separate, autonomous organization. Formerly headed by a single director, the programs were within the existing campus structure, and coordinated by the faculty in the various departments of the campus. The new structure is headed by a Provost who quickly appointed three directors to head the various activities coordinated by the programs. During the past year, one of these directors was upgraded to Dean of the Open Campus and his administrative responsibilities were increased.

Although the full-time staff of the Open Campus has remained small, it has a diverse range of activities, reaching nearly 15,000 individuals in its third year of operation. All of the students and most of the employees are part time. They are either involved in short intensive workshops of one, two, or three weeks, or in one or more courses or programs that run for varying lengths of time.

St. Mary's Junior College is an example of an institution that has recently transitioned out of the creation phase. During its first decade, until 1973, the college was in this phase; it is still creative, but its formal structure has changed. It was administered by a president and a vice president who oversaw the day-to-day operations. Innovations in curriculum were encouraged by the administrators and most faculty took advantage of this situation, often applying for outside grants for curricular innovations.

The academic structure of SMJC was also relatively unencumbered during this period. The college stressed a balance between technical and general education. The faculty were divided into two divisions, one for technical education and one for general education; and there was an associate dean for each area. The college was formed in 1963 and the associate deans appointed in 1966. There has been a faculty committee system since the founding of the college. Initially, the faculty played a strong role in governance, but their role subsided when the faculty became primarily concerned about curriculum development. More recently they became concerned about academic governance.

Doane College, prior to the reorganization of the late sixties and early seventies, provides another example of a creation phase organization. Founded in 1872, Doane lasted nearly an entire century as a phase I organization. It has historically been administered by a president, academic dean, and budget officer. The budget officer and president have been the primary administrative decision makers and the dean, in consultation with the president and faculty, was the primary academic decision maker.

Although Doane has for the past century offered a diversity of liberal-arts programs, its faculty and student body remained small. Many disciplines have had no more than one faculty member. From decade to decade the primary emphasis of the college shifted from religion to politics to music, but the academic side of the enterprise remained loosely structured. Doane was organized into five divisions, each headed by an appointed chairperson who volunteered his/her administrative services to the institutions.

Although these institutions are very different in terms of their orientation and purpose, and even their activities, their structural characteristics appear similar. Each is headed by two or three top administrators, each has a loosely-structured academic program, and each places a low emphasis on administration.

Phase II: Direction. Direction phase institutions are characterized by the formalization of the academic and administrative structures, the development of a long-range planning capacity, and the development of a formal management system. The case studies provide three examples of direction phase organizations: during the past few years both Doane College and St. Mary's Junior College appear to have entered the direction phase, and during the late sixties, Xavier University exhibited many of the characteristics of direction phase, although it now appears to be transitioning to a more complex phase of development.

Nineteen seventy-three was the base year of St. Mary's Junior College's new direction. At that time, President Sister Anne Joachim Moore appointed a committee to study the college's future, which set in motion a series of changes that have since resulted in transitions in the formal structure of the institution. The long-range planning committee set new program goals for the institution that have since resulted in a series of new technical-education specializations and a continuing-education program. They have now added a third component to the institution's academic structure--new programs and continuing education--which previously included just two divisions: technical education and general education. This has been accompanied by increased formalization of the administrative structure.

In 1975, the college moved from a system with a president and one vice president to a system with a president and four vice presidents. The new system increased the importance of one already existing administrative position and created two new administrative areas. Although the structure that was first implemented has not lasted--two of the vice presidents left the institution this past summer--the college has remained committed to a more formal administrative structure, the maintenance needs of the existing operation are greater than before.

Doane College's transition to the direction phase was more gradual. The initial signs of the change were evident in the early 1970s, although the transition is still taking place. In 1970, the college developed its first long-range, five-year plan; in 1972, it moved to a system with three vice presidents. It took Doane several years to develop a viable planning process; one that projected realistically into the future. While the first few years of this may have been harmful to the immediate future of the college, since they projected larger enrollments than the college realized, it helped establish the rudiments of a new, more formal management system. The new structure with three vice presidents did not make a big difference initially. For almost one hundred years the college had functioned with the president and budget officer as the key administrative decision makers. The creation of three new vice president level positions--for the budget officer, director of development, and academic dean--did not change this pattern overnight; it took some time.

Doane is an excellent example of an institution catapulted into a more complex organizational phase because of environmental changes. In the early seventies, the college faced enrollment declines because of the downward shifts in the number of traditional college-age students attending higher-education institutions. The college also faced severe economic problems because of the enrollment declines and of the shaky economy. One of the ways Doane College began to deal with this situation was to make some of the administrative changes described above. Another was to reorient the mission of the college toward a blending of the liberal arts with career education. This new emphasis has led to several changes in the college's academic structure, including the addition of a career-development program and reorientation of the basic liberal-arts curriculum.

Xavier University was in the direction phase during the late 1960s; some signs of this phase were exhibited earlier. The three-college structure of the university had emerged soon after the university was created, but for the first several decades the pharmacy school and the graduate school were both small and operated as if they were departments in the college of arts and sciences. In the late 1950s and early 1960s, the college began to formalize some of its administrative functions: the dean of students, the development office, and business office developed. In the late sixties, another series of events occurred: a new president was appointed who commissioned a study of the governance structure as one of his first acts; the college administrative structure was reorganized; and the college began to develop its long-range planning capacity in earnest. Since that time, however, the university has experienced growth, increasing in size by nearly two-thirds, has strengthened its existing academic programs, has undertaken new curriculum developments, and has continued to formalize its administrative structure. These more recent changes have led Xavier into a new developmental phase.

The characteristics of a direction phase organization differ significantly from the characteristics of a creation phase organization. Direction phase institutions have a more formalized administrative and academic structure. They have developed long-range planning and have experimented with and undergone changes in their management systems; these will be discussed in the next chapter. They are not as complex structurally, however, as delegation phase organizations.

Phase III: Delegation. Delegation phase organizations are characterized by functionally differentiated organization structures with delegation of administrative responsibility to organizational subunits. The case studies provide three examples of delegation phase organizations: Xavier University, which appears to be entering this phase, West Campus of Valencia Community College, and North Carolina A & T, which is showing some signs of moving into an even more complex organizational phase.

Xavier University of Louisiana has developed a more sophisticated organizational structure and management system during the past few years. The administrative structure is becoming more defined. In 1969, the new Planning Office undertook the first long-range plan and later revised this plan before undertaking the administration of the AIDP program in 1974. The AIDP program has added to the institutional research capacity of the university. Institutional research is coordinated by the Planning Office. A new ongoing planning effort touching most subunits of the organization is also coordinated by this office. The older administrative units are also going through a period of formalization: the Development Office is implementing a structure with several formal subunits; the Budget Office has had a high turnover rate during the past two years as the functions of this office have formalized; the computer center has experienced greater demands from the rest of the university; and the Personnel Office is playing a more active role in defining administrative and staff positions for the university.

Xavier's academic structure is becoming formalized as well. The basic structure of a university dean and three college deans has existed for a long time, but there is currently an increasing formalization of these administrative roles. The School of Pharmacy is now more autonomous than it was previously. It has increased in enrollments and moved into a new building; the school's chief administrator has taken on more responsibilities for the school's administration. In Arts and Sciences, the largest school, more administrative responsibilities have been passed on to the academic departments, which are the strong units in the college.

The West Campus of Valencia Community College is experiencing an increasing formalization as well. During the past two years, the academic departments have taken on more administrative responsibilities and department chairmanships have become administrative positions as well. Although the administration of the college is going through more formalization, the college-wide administration has moved off campus and is not considered part of the campus administration. The student-affairs organization, the largest administrative unit left on campus, is going through a period of increased formalization however. The Dean of Student Affairs is presently increasing the responsibilities of the directors of the various student-affairs programs and trying to get administrative appointments for the directors.

North Carolina Agricultural and Technical State University is another example of a delegation phase organization, although it is currently showing signs of transitioning to a more complex organizational phase. Over the past two decades the university has evolved

a highly-delegated and differentiated organizational structure. The administrative structure is well-defined. There are four vice chancellors and a few other directors reporting to the chancellor. The job descriptions and administrative procedures are well-defined. There are seven schools with deans reporting to the Vice Chancellor for Academic Affairs. With the exception of the School of Nursing and the School of Graduate Studies, each school has several departments with chairmen who hold administrative appointments. The departments have been delegated responsibility for most administrative decisions regarding their programs.

These examples illustrate the increasing formalization that occurs during the delegation phase. During the direction phase, some structural formalization occurs; organizations that had previously been managed by a few individuals develop their first formal administrative structures. In the delegation phase, there is increased formalization within administrative and academic subunits and new organizational subunits can be developed.

Phase IV: Coordination. During the coordination phase, central administrative services are developed as a means of coordinating the diverse activities within the delegated structure. Coordinated development allows for maximum utilization of resources in a complex institution and can minimize unneeded duplication. The case studies provide two examples of coordination phase organizations: North Carolina A & T is currently exhibiting some signs of entering this phase, and Valencia Community College has already implemented a coordinated structure.

North Carolina A & T's academic structure shows more signs of a coordination phase organization than its administrative structure. In particular, two of the activities implemented under the AIDP--Academic Advising and Cooperative Education--illustrate the types of development that take place in the coordination phase. Prior to AIDP responsibility for academic advising was delegated through the differentiated structure to schools and departments. The quality of academic advising varied considerably. Under the new system, one office coordinates the advising by developing university-wide information and procedures and by identifying individuals in departments who are responsible for advising. Cooperative education coordinates the experiential-learning options throughout the university. Formerly, these were the responsibility of the individual departments that had developed programs. As a result, there were several inconsistencies in the program and the way credit is awarded by different departments. Some of these inconsistencies, which have been identified by external evaluators for the AIDP project, can be resolved by this coordinated approach.

The administrative structure of A & T also shows increasing signs of coordination. It is a part of the multi-campus University of North Carolina and has to coordinate its activities with the system-wide administration. The Planning Office, which currently coordinated the planning activities of all organizational subunits, is trying to develop strategies for setting university-wide objectives and priorities. The university is also beginning to need a more coordinated management system and which is discussed in the next chapter.

Valencia Community College moved full force into the coordination phase when it became a multi-campus system in 1974. Prior to that time, all of the college's activities had operated on one campus. Both the campus-based and continuing-education activities had been housed in the campus-based academic departments. When the college became multi campus, the central administration moved off campus; the Open Campus was formed, and planning began for the East Campus. The movement by the college toward the coordination phase has not excluded the possibility that the three campuses, the major organizational subunits, remain in a prior developmental phase, as their discussion earlier in this chapter illustrates.

Valencia Community College has shown signs of increased coordination and of the structural modifications needed for its implementation. While most of the academic administration has been delegated through the structure to the campuses, some new college-wide activities are being implemented across campuses, especially under AIDP. The Curriculum and Instructional Development (CID) Center, part of the Alternative Modes of Learning component of the AIDP project, is being implemented across campuses. The CID Center works with faculty from both of the permanent campuses. The yearly rotation of the CID Center between the two campuses also symbolizes the college's commitment to making this a college-wide rather than a campus-based enterprise. The implementation of all the AIDP activities at VCC is progressing with a similar emphasis on activities that are college-wide, as opposed to department or campus based.

VCC's college-wide administration provides a better example of a coordinated organizational structure than any of the other case studies. The administrative functions for all of the campuses have been centralized. The only major exception to this is student affairs, which is still housed on the campuses. However, even registration, which is usually housed under student affairs, is part of the central administrative services. Whenever possible, academic and administrative decisions are made and implemented on a college-wide basis, especially if they will prevent unneeded duplication.

As these examples illustrate, coordinated structures need something to coordinate. Once an organization structure is sufficiently developed, with large organizational subunits and limited resources, coordination is needed to increase efficiency. The coordination phase is the most complex organizational phase illustrated by the case studies.

Beyond Coordination. The general model speculates about a phase V, collaboration, organization. As used here the term collaboration does not necessarily refer to interpersonal processes, but instead it refers to new organizational arrangements, such as matrix management. Although there are no examples contained within the case studies, there are examples of more complex organization structures in higher education, many of which may show signs of structurally more complex developmental phases. According to the general model, in the collaboration phase, representatives from central administrative units and functional subunits within the structure can work out new collaborative arrangements for creating and managing programs. The way some university systems are implementing open or extended campuses illustrates this possibility (Medsker et al., 1974; Lee and Bowen, 1975). For the purposes of this study, however, the collaboration phase will be left to speculation.

General Model. Based on these examples it is possible to revise slightly the general model of structural development suggested earlier. Table III-A refines the descriptions of structural development proposed in the model outlined in Chapter IV. It suggests a focus and general developmental characteristics for each phase.

Table III-A

Phases of Structural Development for Colleges and Universities

Phase	Focus	Structural Developments
I	Creation of new programs	Little administrative development, usually two or three key administrators, small faculty and student body
II	Direction (long-range) of Institution defined	Administrative structure becomes more formal, multiple academic programs may develop
III	Delegation of authority to functional subunits	Differentiation of administrative structure, administrative responsibilities delegated to subunits
IV	Coordination of subunit activities	Central administration develops, policies and proceedures coordinated across subunits, coordinated program development

The model suggests that as institutions develop structurally, they also become more complex. Structural development is associated with, although not synonymous with, increased size. During each phase, a distinctively different organizational form emerges, building on the characteristics of the prior phase. During the initial phase, the structure is simple: the faculty and student body is small; the college is usually run by one or two key administrators; and the developmental focus is on creating academic programs. As the institution enters the direction phase, the administration becomes more formalized, some differentiation of administrative and academic functions occurs, and the focus of the organization shifts to program maintenance and to defining the long-range direction of the organization. During the delegation phase, existing functions, perhaps added during the direction phase, are formalized into organizational subunits and new functional subunits--schools, colleges, or campuses--may be added to the organization. The coordination phase is the last phase we have evidence for in the case studies. During this phase the developmental focus shifts to centralized programmatic development and centralized administrative services to coordinate the activities of diverse functional subunits. The basic outlines of the model remain consistent with the hypothesized model.

Developmental Measures

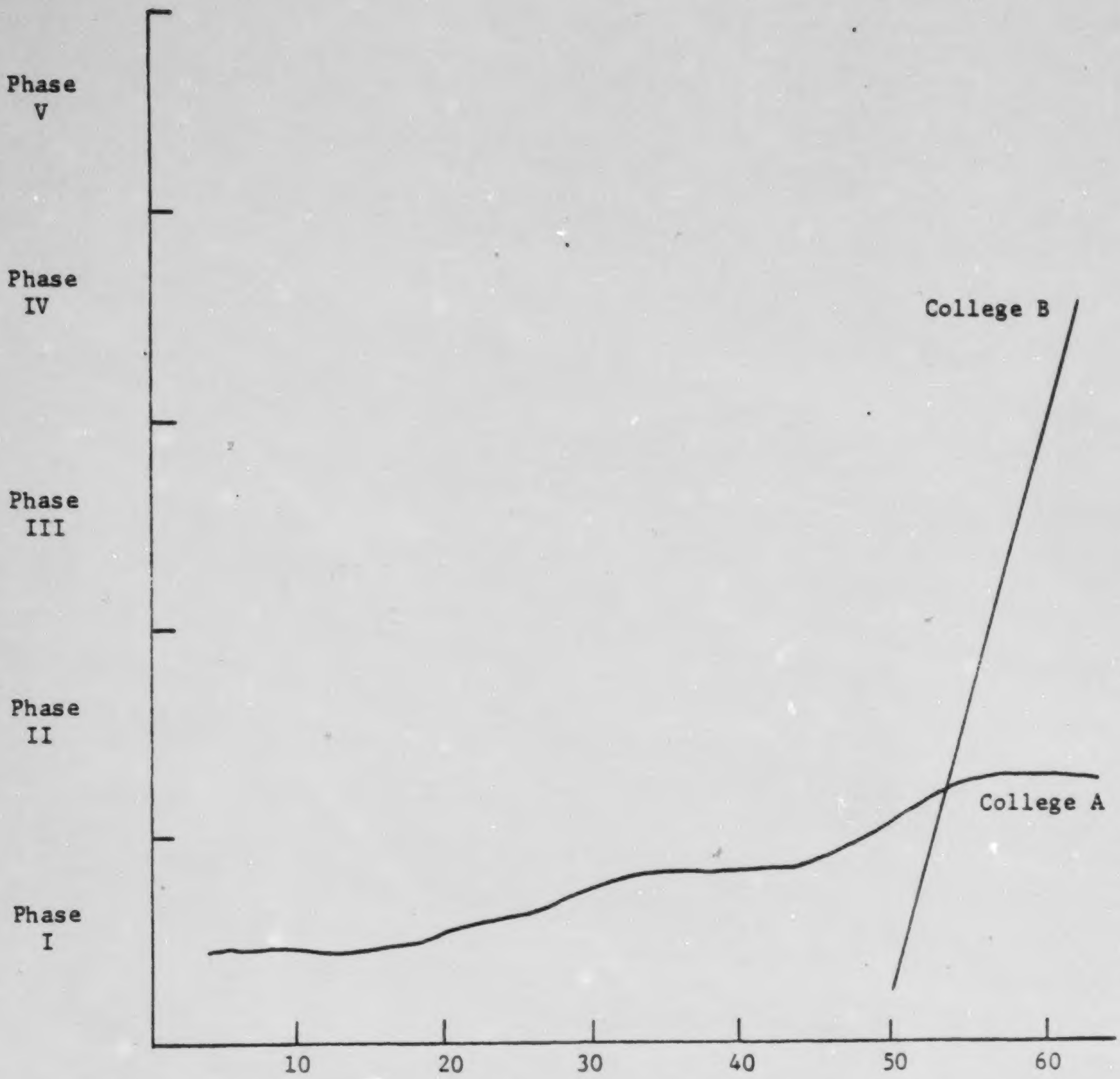
The analysis of the case institutions shows that a developmental sequence can be discerned by examining institutions' structures, histories, and management. In spite of considerable variance in the type, control, and mission of the case institutions, a generalized sequence of development can be determined. Institutions that have more advanced technologies or more advanced delivery systems do not appear to differ considerably in their structural characteristics from more traditional institutions. The task of developing a set of measures to predict developmental phase is more difficult, but is attempted in this chapter nonetheless.

The structural history of a college, its evolution and development over time, is the key factor in determining the developmental phase. The structure of an organization is a product of its history: the addition of new administrative or academic subunits is the result of past internal decisions and external forces. Yet, these structural developments, along with the individuals that comprise the institutions, create both the basis and constraints for future developments. Although the specific characteristics of institutions seem to vary, the actual sequence appears consistent; an institution must pass through each successive phase. A new school cannot be created as a coordinated institution. Some institutions may reach more complex phases more rapidly than others, however.

In spite of the importance of history, age is a poor predictor of structural development phase. Greiner (1972) uses both age and rate of growth as measures of development in his phased model for business organizations. Figure III-A illustrates the importance of the rate of growth to the structural development of colleges. In this illustration College A takes over fifty years to enter phase II, while another institution, College B, takes less than ten years to

Figure III-1

Rate of Structural Development



progress through the first three phases and to enter phase IV. In fact, a more recent institution is probably more likely to enter a more complex developmental phase than an older institution that has not experienced structural change in a long time. Doane College and Valencia Community College illustrate this situation: Doane lasted nearly a century as a phase I institution, while Valencia entered a coordinated phase in less than ten years.

Although there are no examples of movement from a more complex into a less complex phase in the case studies, this remains a possibility. The general theory does not exclude this possibility and if one examines the condition of many contemporary institutions, one might see how such a move is possible. If, for example, a university with three colleges--an undergraduate school of arts and sciences, a school of education, and a small graduate school that offers master's degrees in education and arts and sciences--experiences a decrease in enrollments in education, a major reorganization into a single college structure might be necessary. And to increase efficiency, the administrative structure might be simplified as well. Although decreasing in size and complexity is undoubtedly more difficult than the reverse, it is nevertheless a reality some institutions might have to face in the near future.

To define a specific set of variables to predict developmental phases is not an easy task. One must examine the history of an institution and its structure and management to be certain where it falls in the developmental sequence. In addition, the developmental phases and categories are descriptive; they are not found within precise places on a table or graph that can be plotted or categorized easily. Instead, the most quantitative measures can provide an indication of where an institution might fall on the general sequence, just as an individual's age, within five or ten years, might give an indication of the life phase he or she is in, or the types of life crises he or she might be facing. Age alone, as stated, is not a definite predictor of a developmental phase for the individual adult and no set of variables can provide definite predictors of developmental phases for organizations.

Instead, quantitative measures provide an indication of where an institution might be in the developmental sequence and an indication of what types of problems an institution might be facing. To the extent that it is possible to generate a few measures to predict development, such measures will be useful as indicators for funding and research. However, the more that is known about the history, structure, and management of a college, the easier it should be to determine the types of innovations and developments that would help it.

The most that can be hoped for from this analysis of a few institutional case studies is that a general range can be suggested for a few variables that might be useful in predicting developmental phases. Table III-B compares the institutions used as examples in the earlier discussion on selected variables: enrollment, number of faculty, number of chief administrators, number of departments or divisions, number of schools or colleges, number of campuses, and number of major administrative divisions. The first three variables are measures of institutional size, while the second four variables are

Table III-B

Comparison of Case Institutions on Selected Characteristics, 1976-77

	VCC East Campus	VCC Open Campus	Doane College	St. Mary's Junior College	Xavier Univ.	VCC West Campus	North Carolina A&T State U.	Valencia Community College
Enrollment (FTE)[1]	2,000	650	625	788	1,889	5,000	5,515	7,650
Faculty[2]	27	n/a	32(F) 4(P)	79	183	332	322	355
Chief Administrators[3]	2	1	6	5	12	3	13	14
Departments & Divisions[3]	2	3	5	3	23	12	32	15
Schools/Colleges[3]	1	1	1	1	3	1	7	1
Campuses[3]	1	1	1	1	1	1	1	3
Major Administrative Divisions[4]	1	3	3	3	3	2	4	7

1. FTE enrollment are actual FTE reported by the institutions, except Valencia CC and its campuses which are based on estimates provided in interviews since the college did not provide an enrollment breakdown by campus.
2. These totals came from various sources: interviews for East Campus, Faculty Handbook for Doane, catalogues for St. Mary's, Xavier, and NCA&T, and estimates based on 1975-75 reported statistics for VCC and VCC West Campus.
3. Based on count from college and university catalogues.
4. Based on examination of organizational charts.

complexity measures. A discussion of each of the variables and its usefulness as a measure of structural development follows.

Enrollments. FTE enrollment is the full-time-equivalent students enrolled in a given institution. Except for Valencia Community College, and its three campuses, the FTE enrollment totals are the actual numbers reported by the institutions. In the case of Valencia Community College, these numbers are estimates given in interviews with campus administrators, since the college did not provide a breakdown of its FTE enrollments by campus. With the exception of the East Campus of Valencia Community College, enrollment totals increase as the institutions become more complex structurally. This exception of East Campus makes sense conceptually; it is a young campus and its FTE student enrollments have increased faster than its other characteristics.

Faculty. Faculty is the number of teaching faculty. When appropriate this data should be collected as full-time-equivalent (FTE) faculty, but, unfortunately, these data are difficult to collect, even in Title III applications. An earlier study of institutional change using the Title III application and award data base indicated that even when asked to report faculty as FTE, many institutions may have reported total faculty (St. John, Tingley, and Gallos, 1977). For the totals used here, I went to different sources: catalogues, faculty handbooks, the Title III application and award data, and interviews. The totals from catalogues are the most inflated values since these include administrators, who usually hold faculty appointments, as well as teaching faculty. The comparison suggests that there is an increase in the number of faculty as an institution becomes more complex structurally. As the number of programs and majors a campus offers increases, the number of faculty increases. If this data could be gathered more accurately and consistently, it would probably be a good measure of structural development.

Chief Administrators. This is also a useful measure that is not collected consistently in the Title III data base, and that is seldom collected constitently by other sources. The Title III application has asked this question differently for different years--it varies between the number of full-time administrators and the number of chief administrative officers. The totals used here are from the college or university catalogues. The total number of chief administrative officers includes heads of major administrative divisions or programs and academic administrators for schools and colleges. Academic department chairpeople, who in the case of Valencia Community College are heads of the major academic units, have been excluded. Again, the general pattern is toward an increase in the number of administrators as institutions become more complex.

Academic Departments/Divisions. This is the number of academic departments or divisions on campus. In the smaller, less complex institutions, faculty were organized into divisions instead of departments. According to these figures, the number of academic departments tends to increase as the schools get larger. The exception is Valencia Community College and its various campuses. At Valencia the department or division is the dominant academic subunit, since the college is not divided into a number of smaller schools. On this measure there may be a difference between institutions according to institutional type: two-year schools may be more likely to have academic departments as their major academic unit, while schools or colleges with different foci may be more dominant in four-year institutions. If this is the case, academic departments would tend to be larger and to combine more disciplines at two-year institutions.

Schools/Colleges. This is the number of schools and colleges in the institution. For the three four-year institutions, this number seems to increase as the institutions develop structurally: Doane has one; Xavier has three; and North Carolina A & T has seven. Valencia Community College and St. Mary's Junior College are not divided into different schools. At both two-year institutions technical education and general education programs operate side by side within the same college structure.

Campuses. This is the number of separate autonomous campuses associated with a college or university. It does not refer to separate pieces of land owned by the university, extended-learning locations, or extension stations. There is only one example of an institution with more than one campus, Valencia Community College. This appears to be an important indicator, however, since an institution with more than two campuses has a drastically increased need for coordinated management.

Major Administrative Divisions. This is the number of major administrative divisions within the institution: financial affairs, academic affairs, etc. In the instance of a multi-campus system, campuses were treated as single administrative divisions. This measure seems to make the least difference of those considered. Although it could be argued that the two most complex institutions--Valencia and A & T--have the most administrative divisions, the evidence to support the assertion that this is an important measure is slim, especially since there are many confounding factors. The campuses of Valencia Community College, for example, have many of their administrative services handled by college-wide administration; one of the campuses, West Campus, once housed the central administration.

The potential usefulness of these seven measures as indicators of structural development varies considerably. Enrollment appears to be a useful measure, since it tends to increase as the institution develops structurally, but enrollment alone will not be a good predictor since a young institution, like VCC's East Campus, might change faster in enrollment than it changes in its other characteristics. Chief administrators also appear to be a useful measure or indicator since they too tend to increase as institutions develop structurally. This measure may also indicate the same type of developments as the less reliable measure, major administrative divisions. There are instances where this is not reliable, however, like the campuses of VCC where central administrative services have been moved off campus and the number of chief administrators left on campus is small, given the complexity of the organization. The number of faculty could be a useful measure and, if it could be collected more consistently, it might prove a good complement to numbers of students and administrators.

The complexity-related measures tend to vary even more than size-related measures in their usefulness as indicators of structural development. The number of schools and colleges appears to be an important indicator for the more complex developmental phases, especially for four-year institutions. An institution with several schools and colleges faces more management problems than an institution with a single academic focus. The use of the schools and colleges criteria may be less useful for two-year institutions than for the four-year institutions, however, since the four-year institutions are more likely to be organized into these units. The number of campuses is also important, especially as an indicator of the need for coordination, although this is not the only indicator of this need. When the number of schools and colleges gets beyond a certain number, the institution may experience the same types of organizational and management needs. The numbers of departments and divisions and of major administrative unites appear less useful because of the way colleges and universities are organized.

The number of administrative divisions does not appear to vary much. There may be a limited number of top-level administrative divisions that are manageable, beyond which the organization might get out of control of the top administrators. For departments and divisions the reverse is the problem: there appears to be too much variation. In some institutions, departments may be strong administrative units and may have professional administrators, while in other institutions there may be many such divisions or departments for the size, and the chairpeople may be part-time chairpeople who are primarily faculty.

Based on a consideration of these variables, it is possible to suggest a range for a few measures that might indicate or predict phases. Table III-C proposes four possible indicators of structural development. These are ranges that can be used to predict developmental phases. These ranges are tentative, however, and therefore should be interpreted with caution. They could provide a basis for other investigations using this developmental model. According to these ranges, we might expect:

-phase I institutions to have fewer than 600 students, fewer than 5 chief administrators, one school or college, and/or one major location (if it is a nontraditional institution, like the Open Campus of Valencia Community College, it might offer courses in diverse locations);

-phase II institutions to have between 600 and 1,800 students, 5 to 10 chief administrators, one to three colleges or schools, and/or one major location;

-phase III institutions to have from 1,800 to 5,000 students, 10 to 15 chief administrative officers, 3 to 7 schools, and/or one or two major locations;

-phase IV institutions to have over 5,000 students, over 15 chief administrators, over 7 colleges or schools, and/or more than 3 major locations.

Not all institutions will fall into these expected ranges. Within the case studies, we have many exceptions--more than one for each variable. Any given institution might have two or three out of the four characteristics within the predicted range. However, short of developing descriptive histories, these few measures might help the

Table III-C

Possible Indicators of Structural Development for Colleges and Universities

Phases	I	II	III	IV
Enrollment (FTE)	0 → 600	600 → 1,800	1,800 → 5,000	5,000 →
Chief Administrators	1 → 5	5 → 10	10 → 15	15 →
Colleges/ Schools	1	1 → 3	3 → 7	7 →
Campuses	1	1	1 → 2	3 →

outsider to make an informed guess about an institution's developmental phase.

Rather than use a set of measures to predict developmental phase, in the long run it might be more appropriate to develop a set of questions about the institution's history, structure, and management. This, in fact, should be the objective of subsequent research in the area. First, the relationship between structural development and management effectiveness should be considered.

Conclusions

The analysis of the case studies suggests that a sequence of structural development can be identified for colleges and universities. This sequence closely resembles the developmental phases described in the general theory in Chapter IV. These labels describe the primary developmental foci of the organization. Institutions in the various phases do have many characteristics in common, however.

It is possible to develop a set of measures that can be used to predict developmental phases. Since no single measure can adequately predict developmental phases, the ranges for several measures can be more appropriately used as general indicators. Institutions with some of these characteristics--say, two or three of the four proposed measures--might be appropriately considered in one or another of the developmental phases. However, to accurately discover an institution's developmental phase, its history, structure, and management system must be examined. Eventually, it might be possible to develop a set of questions that could be used to predict developmental phases more accurately than quantitative measures.

To be useful to institutional planning and management, or to government or foundation interventions designed to improve institutional planning and management, the model has to do more than suggest measures of structural development. It should also examine the relationship between structural development and institutional management.

CHAPTER IV

MANAGEMENT EFFECTIVENESS

Although the emphasis placed on management effectiveness in higher education has increased considerably during the past decade, there are few viable models for college and university management development that have taken into account structural differences. A structural development model was proposed in the preceding chapter that distinguishes differences between diverse institutional characteristics as institutions develop. This chapter explores the basic relationship between structural development and management effectiveness generally by analyzing the relationship between the structural characteristics and management systems at the five selected institutions. Put very simply, management effectiveness can be defined as a measure of an institution's ability to meet systematically its own management needs. It is my thesis that a college's management needs will change as it develops structurally, as it increases in size and complexity. Before this relationship can be considered, however, the effectiveness of the management systems at institutions in different development phases will be considered by analyzing the cases being used as models. The next chapter will frame these same issues more systematically, considering the types of management outcomes an external intervention program like Title III might reasonably try to effect.

Management Effectiveness

The five institutions, used in this study were considered exemplary by AIDP Washington, D.C. staff for their management and for their overall use of Title III funds. Rather than accept this professional judgment without question, I have considered the effectiveness of the management systems at these institutions according to five criteria. In the following discussion of these criteria, I examine both the effectiveness of the management at the case institutions and the usefulness of the criteria as measures of management effectiveness.

Attention Paid to Management Needs. This criterion considers whether or not a college has examined its own management needs. It is an important and relatively well-defined measure of management effectiveness. Each of the case institutions has made considerable progress during the past few years in identifying their management deficiencies. Two of the campuses--St. Mary's Junior College and Valencia Community College--have emphasized the study of their management problems in order to identify management deficiencies and possible systems that could aid in their resolution. Another, Doane College, has been involved in a slow deliberate process of examining its management deficiencies and adapting its present management system to meet these needs better. The remaining campuses--Xavier University and North Carolina A & T--have implemented one set of management changes, only to discover that once the most basic management needs were met, others emerged. At all five campuses, management appears to be an important concern and considerable attention has been paid to institutional management by faculty as well as by administration.

Implementation of a Viable Management System. This criterion considers the process of implementing a viable management system. To be viable, a management system must address the unmet management needs on campus. This usually requires adaptation of standard practices and procedures to the uniqueness of a particular institution. Again, this is an important factor when considering management effectiveness, since the process of implementing a new management system is a difficult, incremental and adaptive process. Each of the institutions studied has had to adapt existing models to their enterprise. Although none has reached an equilibrium between identified needs and the development of a management system that meets those needs, each is currently in the process of implementing new management systems.

Effectiveness of Resource Use and Planning. This is the most complex, and probably the most important, of the effectiveness criteria used in this study. Identifying the gap between an institution's aspirations and its ability to finance its plans is an essential part of this criteria. Another is the relative efficiency of the system and its programs. Of primary concern here is whether or not the institution's plans are reasonable for the institution. The performance of the case institutions varies on this criterion, although all five institutions are making some progress in this regard. A synopsis of the situation at each institution follows.

--Doane College ran into severe financial problems in the early seventies when its growth plans were not realized; enrollment declines were experienced instead of enrollment increases. Since that time Doane has made a more conscious effort to close the gap between what it plans to undertake and its ability to finance its goals.

--St. Mary's Junior College has been the most successful of the case institutions at financing its plans. It is also the only institution that consciously addressed the institutional aspiration issue before it became a problem: the college intends to remain small and has been remarkably successful at financing its plans, which are usually needed by the institution.

--Xavier University, like Doane College, experienced financial difficulties in the late sixties and early seventies. It too has had to adjust its growth aspirations downward. In addition, the university has had to make improvements in its fiscal management, which had become a source of many of the institution's problems. Increased size would not have been a solution to the fiscal difficulties if the university's income was not well managed.

--North Carolina A & T State University is a well-financed institution compared to other institutions in this study and to other public four-year colleges funded by Title III. In recent years the institution has done well finding the funds to meet its plans. However, there are a few signs that the gap between the university's aspirations and finances may be widening. During the past few years the university has had a slight operating deficit; it has not been able to meet its matching commitments for AIDP, and its enrollments have increased at a faster rate than its income from the state.

--Valencia Community College, like St. Mary's, has been fortunate to have the ability to generate funds it needs to meet its aspirations. It has encountered problems with state funding from time to time, and on one occasion was forced to open a new campus under severe financial conditions. In times of financial stress it has shown a remarkable capacity to generate funds from external sources.

The case institutions appear to be dealing with the problems of aspirations versus financial capacity in different ways. Some have adjusted their aspirations downward, while others have weighted growth plans against available funding possibilities. In spite of these differences, each is starting to look at the relationship between financial possibilities and the planning process.

Quality and Effectiveness of Constituent Involvement. Colleges and universities have traditionally placed considerable value on the involvement of the various constituencies in the governance process. The relationship between effective management and constituent involvement has seldom been examined. In fact, it is often hypothesized that constituent involvement is inefficient and therefore competes with the need for more effective management. Each of the institutions studied has placed considerable emphasis on constituent involvement in decision making. The three four-year colleges have done much better than the average American college in establishing mechanisms for faculty and student involvement. The two-year institutions have been less successful at involving students, although one, Valencia Community College, has recognized the importance of student involvement and is trying to establish mechanisms for it. Both have experimented with different mechanisms for involving faculty and appear quite effective at this. In every instance the involvement of faculty and students goes beyond involvement in traditional academic-policy issues and includes some of the most important planning and management issues. It seems, therefore, that constituent involvement may be an important measure of management effectiveness in higher education.

Renewal Capacity. Renewal capacity is the vaguest of the criteria considered as measures of management effectiveness. Nevertheless, the ability of an institution to renew itself may be the most important measure of the long-range effectiveness of any institutional management system. The case institutions all provide interesting examples of institutional renewal. The degree of emphasis placed on renewal varies, from its being a major focus of the institution to its being undertaken in times of severe stress. Each has been tested in its own way: Xavier and Doane have faced severe financial conditions and instituted major changes to remedy them; North Carolina A & T has examined its organization and governance in the midst of conflict and made modification of its structure as a result; and St.Mary's

Junior College and Valencia Community College have made the renewal process an essential part of their institutional mission.

Overview. Although none of the institutions studied here can be considered to be perfectly managed, each appears to be effectively managed according to the general criteria used in this investigation. Each has made important inroads in the development of more effective management systems during the past five years, and each is trying to adapt standard management procedures and systems.

The five criteria were useful indicators of management effectiveness, especially when used together. They provide colorful pictures of the institutional management process. These are not the only indicators of management effectiveness; nor can we be sure that they are the most appropriate. After all, these are exceptional institutions, at least when compared to other developing institutions. These institutions are models, not because they represent the state-of-the-art in institutional management in higher education, but because they represent different ways institutions can develop effective management systems.

One measure of management effectiveness that was not considered explicitly, but which appears important in the case studies nonetheless is the quality of top leadership. Cohen and March (1974), in one of the best studies of college leadership to date, report that the average length of tenure for college presidents is about ten years and that for financially less well off institutions this length of tenure appears to be even less. In four of these case institutions, the president has been the chief administrator for over ten years. The exception, Xavier University, has had its current president for nine years. In each instance the president appears committed to the institution. Based on interviews with a diverse cross-section of people on each campus, I have concluded that these presidents are popular, trusted, and well thought of. Presidential leadership may be a hidden factor that is essential for effective college management or it may be an unimportant by-product; if presidents are successful they tend to stay longer. Whether it is a cause or effect, however, this factor merits consideration in future studies of management in higher education.

For this study, which considers the relationship between structural development and management effectiveness, the measures that have been considered seem appropriate. They show a strong indication that the institutions selected for study are well on the road toward developing effective management systems and therefore provide useful models for analysis.

Management Needs

This section analyzes the management needs identified and changes implemented by the case institutions in different developmental phases. The institutions were categorized into developmental phases in the last chapter, which included historical examples and examples of subunits of larger institutions. These same examples are considered here.

Phase I. Creation phase institutions are usually managed by a few individuals who consult with other organization members about the development and maintenance of the academic programs. Four examples of creation phase organizations were presented in the case studies and analyzed in the previous chapter: each is a loosely-structured organization with a compatible management system.

Both VCC campuses are managed by a provost and dean: East Campus has had this arrangement since it was first created and Open Campus is currently moving toward this system. Both campuses are oriented toward innovation and toward the creation of new programs. At Open Campus, the dean and three program directors work closely with adjunct faculty and members of the community on the development of new courses and programs. At East Campus the dean works closely with faculty on curriculum development while the provost takes more responsibility for planning new programs. Neither campus has an elaborate management system. The management needs identified by administrators in interviews included more budgetary control at East Campus and more access to college-wide decisions at Open Campus. Neither set of administrators identified long-range planning or program maintenance as management priorities; instead they identified program development as their main focus.

Doane College functioned for nearly one-hundred years as a creation phase organization. Its self image has always been that of a creative organization, considering itself a miniature Harvard of the midwest and often taking on the character of a misplaced Black Mountain

College.* Its management system had always been informal, with the budget officer and president making most administrative decisions, perhaps through collaboration with others on campus or on the board of trustees. Most academic decisions were made by the dean and president in collaboration with the faculty. The involvement of students and faculty in the governance of the college had always been a major concern. Although the major emphasis of the curriculum shifted over time from religion to politics to music, its management system remained relatively constant, and its student market relatively secure. One of the most liberal institutions in the state of Nebraska, Doane went about its activities in a quiet way. It also maintained an emphasis on remaining small until the mid-1960s, when the Carnegie Commission and other national organizations emphasized the number of 1,000 students as the enrollment needed to survive in the 1970s. At that time, Doane College began to emphasize growth; slowly, its structure and management began to change.

St. Mary's Junior College was a creation phase organization until relatively recently. Created by the director and some of the faculty from an older hospital nursing program, the college rapidly evolved a simple structure with a president and vice president. Again the emphasis at the college was on the creation of new programs and on curricular innovations. The president and vice president worked closely with faculty on the development of new courses and programs and on the securing of outside funds to experiment with new learning options. It was a creative environment, with all organization members sharing an image of the college as the creative-innovative institution. Again, little emphasis was placed on long-range planning.

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*Black Mountain College was a small, creative college that emphasized the creative arts. It received national recognition in the late 1940s and early 1950s before it folded (see Duberman, 1972).

Phase II. Direction phase organizations become more structured academically and administratively, as was pointed out in the previous chapter, and their management becomes more formal, emphasizing long-range planning and program maintenance. Three examples of direction phase organizations were given in the previous chapter.

Doane College is entering the direction phase as a stable organization with a long history. In the late sixties and early seventies, the college began to experience severe financial difficulties: it had built new academic building and dormitories requiring large capital investments; it experienced a surge in enrollments followed by an enrollment decline; its growth plans were unrealized and some space was not fully utilized; and large operating deficits were experienced. The college had reached a point where old operating procedures no longer worked. A more sophisticated management and planning process was needed.

In 1970 the college initiated an annual five-year planning process that involved administrators, faculty, and students. Although at first this process resulted in enrollment projections that were unreasonable, the process was gradually adapted to meet the needs of the college and enrollment projections eventually became more realistic. Slowly other aspects of the college's management system began to change as well. The college began to emphasize a blending of career education with the liberal arts, which required that the college interact more with outside agencies and constituencies. Since the faculty would remain the same, under AIDP a process was initiated tha[illegible]volved faculty in the redesign of the basic liberal-arts curriculum to include more of a career emphasis. The maintenance and refinement of the basic curriculum became a major concern. The development of administrative procedures to insure the long-term survival of the college became important as well. Rather than become just a process to develop long-range plans, the planning process at Doane is becoming a means of managing the system, planning for its future, and, at the same time, systematically maintaining the creative development processes, with individuals on campus generating new program alternatives.

St. Mary's entered the direction phase not because of crisis, but success. After a decade of innovation, the president commissioned a long-range planning committee, the first in the college's history. As a result of this experience the college identified long-term goals, including the maintenance of existing programs and the development of new administrative services. As discussed previously, the administrative structure of the college began to change and the administrative staff started to take a more intensive look at the college's management needs. Rather than have the primary focus of the top administrators be on program development, their emphasis shifted to maintenance of existing programs and new organizational subunits emerged to manage the innovation process. At first the AIDP steering committee was the focus of the innovation process, but more recently the new programs and continuing education segments have been organized into a major academic subunit. In addition, the college is experimenting with different planning, management and evaluation procedures that will both maintain the organization and allow for continued innovation.

Xavier University entered the second phase before either Doane or St. Mary's. Structurally it began to show signs of increasing formalization in the late 1950s, but the process of management development began much later. This process really began in the late 1960s when a new president was appointed who commissioned a governance study as one of his first acts. The commission's report recommended the reorganization of the formal structure, a change that was adopted, and at the same time it set in motion a management emphasis that remains today. All of the university's administrators emphasize good management, and today, the university is making progress beyond these initial beginnings. These initial steps, however, illustrate the management developments that occur in the direction phase.

Before President Francis took over as chief administrative officer for Xavier University, much of the university's management had been laissez-faire, with the religious order controlling many of the important decisions. One of the first developments beyond the informal day-to-day approach that had epitomized the institution during its early decades, was the development of a long-range planning process. Under President Francis, the university rapidly developed and refined its long-range planning capacity and secured an AIDP grant during the early 1970s. The university was more complex structurally than either Doane or St. Mary's, however, and more structure and management development was essential for the long-term survival of the institution.

Phase III. Delegation phase institutions have much more functional differentiation within their organizational structure, more delegation of management responsibilities to organizational subunits, and more defined policies and procedures than either phase I or II organizations. They do not necessarily lose the creative thrusts that characterize the organizations in earlier phases, but their complex structures necessitate more sophisticated management procedures. Three delegation phase organizations were considered in the previous chapter: Xavier University, which appears to be entering this phase; VCC's West Campus, which appears to be in the middle of this phase; and North Carolina A & T State University, which appears to be transitioning to a more complex developmental phase.

Xavier University has undertaken several significant steps in the development of its management system during the past several years. These developments can be categorized into two general categories: first, more management responsibility and accountability is being delegated to the functional subunit, colleges and academic departments; and second, administrative policies, procedures, and job descriptions are being better defined. To increase delegation to middle managers, the university is implementing a management-by-objective approach in the functional subunits, both administrative and academic. On the academic side of the enterprise, the planning office is working with academic departments and colleges to implement sounder management procedures. The administrative subunits are also making similar adjustments. The university is trying to clarify the stated purpose and objectives of administrative units. Sounder fiscal management and improvement of the development function have been stressed and a procedures manual for all administrative units is being developed. There is also a higher staff turnover rate within the administration than has been previously the case.

The West Campus of Valencia Community College is going through a similar management development process. Since the central administration left the campus when the college became multi-campus, many of the administrative functions that were once on campus no longer are on campus. At the same time those functional and administrative subunits that remain on campus have placed more emphasis on increased structural formalization and management. The academic department, the major academic unit on campus, is increasingly being delegated responsibility for management. The Dean of Academic Affairs described a formal process of working with the department chairmen on goal setting each year; a process that is evaluated at the end of the year, before the funding cycle begins again. During the past summer the management-by-objective process has been stressed and workshops have been held to familiarize faculty and administrators with these procedures. The student-affairs organization, the major administrative unit left on campus, is also undergoing increasing formalization and management development. The Dean of Student Affairs is currently trying to delegate more administrative responsibilities to the directors of student-affairs programs.

Although it is now showing signs of transitioning out of the delegation phase, North Carolina A & T has, during the past several years, demonstrated the types of management development that can take place in phase III organizations. In addition to the increasing formalization of all academic and administrative subunits, there is an increasing awareness of management concerns at these levels. During the past two years the planning office has worked with departments and colleges to set objectives for the programs; administrative units have adopted management-by-objective processes; and planning and procedures manual has been developed to describe the functions of each of the university's administrative units. A & T is more complex structurally than the other institutions in this phase, however, and new management needs have emerged as these more basic-unmet needs have been addressed.

Phase IV. Coordination phase institutions are the most complex institutions for which there are examples contained in the case studies. Phase IV organizations have already developed functional subunits and delegated management systems; in addition they have systems to coordinate these diverse activities more efficiently.

North Carolina A & T is showing a few signs of increased coordination in the management of both its administrative and academic affairs. Academically a few new programs are being coordinated across functional subunits: the academic advising program is trying to centralize some advising services while systematically developing the academic advising capacity of departments and colleges; the cooperative education program is coordinating existing experiential-learning programs within the academic departments and furthering the development of these endeavors in a coordinated fashion. The institution is experiencing the need for increased coordination of the management process as well. During the past several years, the university has made significant steps toward improving the management process in academic subunits, but has done little university-wide management development. The university now plans to develop a process for setting university-wide objectives and priorities; this deficiency has been identified by external evaluators of the AIDP project at A & T.

Valencia Community College provides the clearest example of a coordinated administrative structure and management system. Whenever possible, the college addresses its management needs on a college-wide rather than on a campus-by-campus basis. During the past three years, all administrative services have been centralized, and physically moved from the West Campus to the Downtown Center. Rather than replicate services for each of the new campuses, the college has chosen to centralize the administrative services--financial affairs, development, and administrative services including registration--thus providing coordinated services for all of the campuses.

The management system is both delegated and coordinated. The campus provosts have been delegated major administrative responsibilities for campus affairs. At the same time the central administration, composed of the chief administrative officers from the campuses and from college-wide administration, make decisions on a college-wide basis whenever possible. The college has a strong need for a better management information system to aid the coordination between programs by providing information both to the campuses and to the central administration. The development of procedures and systems that will allow for this dual management process is the primary objective of the management development taking place at VCC under AIDP. Each component of the AIDP program at the college is being implemented on a college-wide basis. Each uses committees composed of individuals from each of the campuses to oversee and coordinate its implementation.

Structure and Management

This analysis suggests that there is a dynamic relationship between structural development and institutional management needs. The previous chapter categorizes the case institutions into developmental categories and defines a set of measures that could be used to predict developmental phases. When the management systems used and implemented by these same institutions are analyzed according to the proposed developmental model, the analysis suggests that the proposed model needs only slight modification.

Table IV-A presents a brief summary of the management systems we can reasonably expect to find at institutions in the first four developmental phases. The management characteristics observed in the case institutions are similar to those in the hypothesized model. Based on this analysis we can predict the following about the basic management needs of institutions in each developmental phase:

--Phase I institutions operate most effectively with informal management systems;

Table IV-A

Phases of Management Development

	Management Focus	Management System
Phase I	Creation of new programs	Informal management system with administration and faculty collaborating on program development
Phase II	Defining long-term direction and maintaining existing programs	Systems established for long-range planning, program development, and day-to-day decision making
Phase III	Delegation of administrative responsibilities to organizational subunits	Systems established for subunit management, and administrative procedures defined for administrative subunits
Phase IV	Coordination of subunit activities	Development of system-wide planning and management procedures, system-wide program development, and system-wide objectives and priorities

--Phase II institutions need to establish more formal planning and management procedures and systems to maintain existing programs;

--Phase III institutions need to establish a delegated planning and management system and formal procedures defining the operations of administrative offices;

--Phase IV institutions need to establish planning and management systems that are capable of coordinating the activities of diverse subunits (departments, schools, colleges, and campuses) and of establishing system-wide programs.

The difference between this newly-hypothesized relationship between structural development and the model that was originally proposed, is that standardized administrative procedures become important earlier in the developmental sequence than was originally hypothesized. According to the general model in Chapter IV, standardized policies and procedures were needed during phase IV. Based on the case analyses, it appears that administrative procedures are needed for the functional subunits during the delegation phase and that system-wide procedures are needed in the coordination phase. Otherwise the original model appears accurate.

The institutional management needs identified in this table are dependent on the phase of structural development. A college or university will not experience the management needs of an organization in a later developmental phase. For example, a phase I institution will not have the same management needs as a phase II or phase III institution. The structural complexity and size of the organization impact on the type of management system that is needed. If management effectiveness is the desired outcome, then attaining a balance between the phase of structural development and management system should be the objective either of institutions or of interventions by external funding agencies.

In addition, there is some evidence in the case studies to suggest that management needs emerge in a fashion similar to Maslow's needs hierarchy for individuals; the needs of the prior stage must be met before a new set of needs emerges. The management systems described in Table IV-A, therefore, function as plateaus at which an institution's management system might be most effective. To reach this plateau, the management needs associated with prior developmental phases must also be met. If a college or university is under managed, which is typically the case in higher education, then unmet management needs may have to be addressed incrementally. The cases of Xavier University and North Carolina A & T illustrate this point. Xavier's characteristics in the late sixties and early seventies were similar to phase III organizations, yet it had to establish more formal planning and management procedures and a system for maintaining existing programs before they could address the need for delegation of management responsibility to schools and departments and for more formal policies and procedures. Once North Carolina A & T addressed the management needs of the prior phase, establishing a delegated system and formal policies and procedures, the need to establish coordinating mechanisms quickly emerged, needs that are only now being addressed even though the institution had many of the characteristics of a phase IV for some time.

Conclusions

Structural development and management effectiveness appear interrelated in some interesting ways. Based on the analysis of the management systems at these five institutions, several tentative conclusions have been drawn about this relationship. Institutional management needs can be viewed developmentally; as a college or university becomes more complex structurally, its management needs increase. In this chapter, I examined several examples of institutions considered to be in different developmental phases. The management needs identified by these institutions and the types of management systems they have implemented can be differentiated according to the four phases of structural development identified previously. Based on this analysis it is possible to construct a model of the most appropriate management system for institutions in each phase.

The model constructed as a result of this analysis is similar to the initial model of structural development and management effectiveness proposed earlier. Four distinctively different plateaus of institutional management needs and corresponding management systems were identified. These plateaus, which indicate the predominant management needs for each developmental phase, must be attained if the institutions are to increase the efficiency of their resource use and planning and to improve their other indicators of management effectiveness. Although there is not enough evidence to be certain, the case studies suggest that attaining this balance between structural development and management development will improve management effectiveness.

Finally, it appears that management needs are additive, that institutions in more advanced phases have to address the management needs of the prior phase, if they haven't already, before they can address the needs of the current phase. The best evidence of this for this assertion is that institutions in structurally-complex phases that have underdeveloped management systems have addressed the management needs of more than one phase: Xavier had to improve its long-range planning and systems for maintaining programs before the need to delegate planning and management practices surfaced; North Carolina A & T experienced greater needs for coordination once it improved its delegated management system; and Valencia Community College, an institution that has grown rapidly, is simultaneously addressing the need to delegate budgetary and other responsibilities to the campuses while it is developing a more coordinated management system.

This method of examining the relationship between structure and management appears to be an exciting new avenue for addressing the problems of management effectiveness in higher education. In the next chapter, a third element, external intervention, will be added to the scheme. The institutions in this study have been funded by the largest federal program designed to improve college and university management systems. With this general model as a basis, I examine the relationship between the federal intervention program and the management needs identified and addressed by the campuses as a part of their AIDP projects. This analysis is used to propose a general model for external interventions designed to improve institutional management systems.

CHAPTER V

EXTERNAL INTERVENTION

The involvement of the case institutions in the Advanced Institutional Development Program (AIDP) provides a unique opportunity to examine the relationship between structural development and external interventions designed to improve management effectiveness. The AIDP program is an intensive institution-based change process that usually incorporates developments in management, curriculum, and student services. For the purposes of this study, both the specific management innovations implemented under AIDP and the general approach used to implement the entire institutional development effort are important considerations.

The AIDP Washington, D.C. staff encourages colleges and universities funded in the program to develop their management systems systematically. Three types of management developments are commonly found in successful AIDP proposals: Planning, Management, and Evaluation Systems (PME); Management Information Systems (MIS); and Transactional Information Systems (TIS). In general, a PME is the institution's overall management system, the MIS is the information system used for management decisions, and the TIS refers to the computerization of institutional financial and student records. Each of these developments can be implemented differently at the case institutions, as the Title III program has not placed many restrictions on the types of developments that may occur in these areas.

Throughout this manuscript, management has been viewed as a system operating within the entire institution rather than as a specific set of management improvements. This view includes formal management practices and procedures as well as the less formal processes of academic management and governance. To be properly viewed, management systems in higher education need to take the context, traditions, and people into account. It is the individuals who often govern the institutions and who comprise its biggest resource. It is precisely because this broader view of institutional management in higher education is necessary that the implementation of AIDP projects on the various campuses are examined as part of the management system.

This chapter has three parts. First, I review the AIDP projects at the case institutions; this focuses on both the specific management improvements implemented under AIDP and the overall institutional-development strategies used by the institutions. Second, I propose a general intervention model suggesting the types of management developments that should be sought at colleges and universities in different developmental phases. Finally, I consider the change strategies that appear effective for institutions at different places on the structural-development continuum.

The Case Institutions

The analysis in this chapter breaks with the precedent set in the prior two. Rather than considering each example of institutions in each phase, each of the case institutions is considered only once, since there is only one AIDP project at each institution.

Doane College is using its AIDP grant to implement the career-development concept, which stresses a blending of the liberal arts and career development. Successful in its third AIDP application, Doane broadened the focus of its institutional-development plans during successive attempts to gain funds. In the two years between the original and the successful proposals, Doane had implemented many of the specific items contained in the original proposal, having initiated the career-development program without extensive outside funding, and as a result the focus of its institutional-development plans broadened. The AIDP project at Doane, ADVANCE as it is called locally, is designed to improve all aspects of the institution: its curriculum, its student services, and its management.

ADVANCE is managed by the Vice President for Fiscal Affairs, who also serves as AIDP Coordinator, and is coordinated by the planning team. ADVANCE can be viewed from two vantages: as a project designed to strengthen various programs on campus and as a project designed to integrate the career education concept into the curriculum. Two aspects of this strengthening process, which adds new personnel and services, are important when considering the intervention program.

This process involves adding new personnel and services to the management area. The specific management-development activities undertaken include computerization of campus registration records (TIS); improvements of the long-range planning process (synonymous with the PME in this case); and creation of an office of institutional research (MIS). Of these developments, the implementation of the TIS, the computerization of campus records is the subject of most criticism, as some on campus agree with the assessment of the external evaluators that this computerization may not be needed. The Office of Institutional Research has conducted a few studies that have proven useful to decision makers, but the full range of activities planned as part of the information system may not be needed. The most important development taking place under AIDP in the management area, however, is the refinement of the long-range planning process that had been initiated prior to the receipt of the AIDP funds.

The second aspect of the project, the integration of the career-development concept into the liberal-arts curriculum, is an important part of the campus management process as well, since it provides an excellent example of the process of managing institutional change. Each year a faculty member from one of the five divisions of faculty--sciences, social sciences, education, humanities, and fine arts--works with the Vice President for Academic Affairs on a curriculum-development process in his or her area. They work with faculty on improvement of the basic liberal-arts curriculum and the integration of the career-development concept. The process encourages individual faculty to work on curriculum changes.

St. Mary's Junior College was funded in the first round of AIDP awards. It had completed its first long-range plan prior to the announcement of the program. As a result of this planning process, they had identified a number of target areas in which increased development was needed and for which funds would be sought. The receipt of AIDP funds allowed the college to go about these developments in an integrated fashion. As a part of its original planning process, St. Mary's committed itself to remaining small, less than 1,000 full-time students, and to remaining innovative.

The AIDP project at St. Mary's is appropriately viewed as a development process of identifying deficiencies, pilot testing and experimenting with possible solutions, and integrating those that are successful into the institution's structure. A steering committee headed by the Vice President for Educational Development, who also serves as AIDP coordinator, coordinates this process. As the AIDP project at St. Mary's nears its end point, many of the activities tried and tested under AIDP are either at or near the point of integration, including the PME. As a result of this process the college has developed a new continuing-education program that reached nearly 1,500 people in 1976-77; developed a number of new technical-education programs, like the program for chemical-dependency specialists; and made a number of innovations in the curriculum, including the continued individualization of the curriculum and the creation of a competency-based nursing program; and experimented with its management system.

St. Mary's is committed to not overdeveloping any aspect of its activities or management. This involves deliberate experimentation. In the management area, changes are not implemented until proven useful, although administrators show a willingness to experiment with different alternatives. For example, the college has experimented with different ways of meetings its management information needs and has settled on a strategy of gathering their own information where necessary and utilizing computers at other facilities, such as the

University of Minnesota computer center, if computerization is needed.

In the management area, this slow, deliberate process of experimentation and of avoiding overdevelopment has netted valuable results, but not without some pain. It is in the management area that St. Mary's has run into the most conflict with AIDP Washington, D.C. staff about its AIDP project. The AIDP Washington staff has placed increasing emphasis on the PME over the last several years and has at times viewed St. Mary's experimental process with dismay since it does not have immediate results. The college has identified long-range planning and program maintenance as the two priority areas in the development of its management system. During the early years of AIDP, they experimented with a long-range planning council to improve their planning and with a functional organizational structure to improve their program maintenance capacity. The planning council was disbanded because they felt it was too early for this type of development and the first reorganization was discarded in favor of a more defined organization structure that is now being implemented. The PME is also nearly at the point of integration after four years of experimentation and testing.

Xavier University had a long history of involvement with Title III before the advent of the Title III advanced program and its subsequent involvement in it. A prior study of Title III (Hudgkinson and Schenkel, 1974) judged Xavier as an institution that would not survive without Title III support. At the time of this study, the university appeared well on its way toward increased self sufficiency. The funding under AIDP was essential to this transition. Although AIDP has funded diverse activities at Xavier, the university has emphasized improving management. Even the curriculum study, one of the major activities in the curriculum-development area, has utilized management techniques in its implementation process and improved academic management will be one of its primary outcomes once implementation is completed. It is from the vantage of increasing the emphasis placed on management and improving the management system that the AIDP project at Xavier should be viewed.

The AIDP project is managed by the Director of University Planning who also serves as AIDP Coordinator. He uses a deliberate experimental process in the management of AIDP: if activities are not successful, or if they do not add to the university mission, they are exorcised from the project. In this way AIDP funds are saved so they can be utilized for other activities that are needed. For example, when I visited the campus, the university was in the process of gaining approval to use some of these funds to improve the development office.

The management-development efforts at Xavier have taken several forms. First, the fiscal management of the university was improved; a private management study was conducted, and the office of fiscal affairs underwent a major reorganization. Second, the refinement of policies and procedures for the entire administration became an important concern; AIDP funds have assisted in the development of a policies and procedures manual for the university. Improvement of the computer center has also recently become a major concern for the university. The management system is placing greater demands on the center. Since the center has not been able to meet these demands, a consultant hired with AIDP funds, is working closely with the staff to improve the management information system and the center's organization and efficiency are emphasized. Everyone seems painfully aware of the fact that to survive the institution will have to improve its management.

Some of the clearest signs that AIDP is being used to improve management at Xavier can be found on the academic side of the enterprise however: the curriculum study is improving the academic management system. Slowly the colleges and departments are developing the capacity to utilize a management-by-objectives approach. Even the academic administrators realize improved management is necessary for increased efficiency and for survival.

North Carolina A & T State University also had a long and successful history with Title III before the advent of the advanced program. Unlike Xavier, A & T had been successful with its financial management prior to entering the program, partially because of its state funding. A & T's AIDP project can be characterized as an effort to develop and strengthen academic programs and to improve the administrative capacity of the university.

The project is administered by a coordinator, who also serves as Assistant Vice Chancellor for Academic Affairs, and by an Assistant AIDP Coordinator. Most of A & T's AIDP-funded activities are in the area of curriculum development. Typically, these are designed to develop new, or to improve already existing, academic programs. They may introduce a new academic major to the curriculum, hire new faculty, and/or hire outside experts to consult on curriculum development. A few of the academic improvements instituted under AIDP--like the Cooperative Education and Academic Advising programs--are designed to coordinate the activities of schools and departments. The student-services component of the AIDP project is also oriented toward strengthening existing services and adding new ones. Administrators in the student-affairs area viewed AIDP as an opportunity to improve the professionalism of their unit.

Before the AIDP project was initiated, A & T had an office of institutional research that kept an updated transactional information system that prepared most documents for the state-wide system and for the university system. In the management area, the university planning function and the management information system have received the most support from AIDP. The first stage of development of these activities was the development of a delegated planning, management, and evaluation system and the development of a PME Manual. The directors of both the PME and the MIS concentrated their energies on the development of the manual during the first two years.

An important outcome of the process of developing the manual was the increased management sophistication of middle managers who were involved in its development. The university formed a planning team that consulted with all subunits, academic and administrative, on the development of their objectives. At that time the planning office was implementing a management-by-objective approach within the university's academic and administrative units. There was a marked increase in the awareness of the importance of effective management on the part of most middle managers; deans, department chairmen, and program directors.

The second stage in the management-development process at A & T is just now getting underway. The new director of university planning spent the last year reviewing different university-wide planning models. It has become evident from external evaluations of the AIDP project at A & T that the university needs to establish better methods of setting university-wide objectives and priorities. The University Planning Office, with the support of the Chancellor, is in the process of establishing such a process. One of the methods of accomplishing this will be a coordinated planning process; another will be the creation of a budget and program review committee that will evaluate the accomplishments of individual programs in light of university objectives.

Valencia Community College had been involved with the Title III basic program prior to its application for AIDP funds in 1976. Valencia, founded in 1967, is the youngest of the institutions studied; it is also the most complex, with three campuses and a central administration. The college became a multi-campus institution in 1973. The AIDP project at Valencia was designed to enhance institutional coordination and to facilitate the transition to a multi-campus college. It is most appropriately viewed as a project designed to improve institutional coordination. It is managed by an AIDP coordinator and several activity coordinators who are part of the college-wide administration.

The AIDP project at Valencia is being implemented in a coordinated fashion. Representatives from the campuses and from the central administration are members of college-wide committees delegated the responsibility for implementing each of the AIDP activities. These committees are coordinated by a college-wide AIDP steering committee, headed by the AIDP coordinator who reports directly to the president. One of the purposes of the committee system is to facilitate the involvement of people from the various campuses in the implementation process. All AIDP activities are being implemented in this coordinated fashion.

One of the primary management deficiencies identified by the president and other college-wide administrators is the underdevelopment of the college's management information system. Because it is a young, rapidly growing institution, college-wide administrative development has not kept up with enrollment growth. At present the college is being confronted by diverse pressures, including a statewide mandate that community colleges develop PPBS, which requires effective management information. The development of the management information system is progressing on two fronts simultaneously: college records (payroll, registration, etc.) are being computerized and, at the same time, a college-wide committee is identifying additional college-wide information needs.

A variety of other management developments are taking place at Valencia, many of which are speeded in their development by AIDP funds. The college is trying to develop new ways of assessing community needs and college impact on the community. It is also trying to develop a delegated budget system that gives campuses more responsibilities for forming their own budgets. The President and most other administrators are aware of recent management developments in higher education and are committed to implementing those that are needed by the college. Since VCC has completed only one year of its AIDP project and many of its activities are still in the planning stage, it is difficult to determine which direction the AIDP activities will go, although the continued emphasis on increasing coordination appears certain.

Intervention Model

An important aspect of the Advanced Institutional Development Program has been the management component, which has been designed to improve the management systems of struggling, or developing, colleges and universities in the United States. Based on the case studies and the analysis of the intervention programs at these institutions, it is possible to suggest a general model for external interventions in institutional management. Table V-A proposes such a model. It suggests the types of management developments that are needed by institutions in the four phases and that could be used as targets in intervention programs.

Table V-A breaks the general concept of an institutional-management system down into four components: planning, management, evaluation, and inquiring. The planning, management, and evaluation system is an integral part of the management-development program used by Title III. To this I have added a fourth component, inquiring system, which refers to the type of information needed in the planning, management, and evaluation processes. It combines both the Management Information System and Transactional Information System notions used by AIDP into one component. Inquiring Systems as contrasted to information systems is a concept used by Weathersby (1975) and others when considering the problems of management information

Table V-A

Intervention Model: Development Matrix for Planning, Management, Evaluation, and Inquiring Systems

	Planning	Management	Evaluation	Inquiring
I. Creation	Short-range program planning	Informal-Collaborative interaction, task oriented management	Market studies, supply-demand studies, knowledge of educational trends	Informal, interpersonal, judgmental, consensual
II. Direction	Add: Long-range planning capacity	Add: Formal systems for maintaining existing programs	Add: Assessment of program impact, student/faculty attitudes, etc.	Add: Standard format reports of transactions; functional budgets; annual reports; some computerization

-continued-

Table V-A, continued

	Planning	Management	Evaluation	Inquiring
III. Delegation	Add: Department and college based planning capacities	Add: Delegate management responsibilities to administrative and functional subunits; formalization of management and policies and procedures	Add: Assessment of subunit performance on stated objectives	Add: Unit cost analysis; seeking comparative data on costs, work loads, and performance data; computers required
IV. Coordination	Add: System-wide planning, priority and goal-setting	Add: System of coordinating diverse subunit activities and initiating coordinated activities	Add: Prioritizing and assessing competing system-wide objectives	Add: Objectives expressed as programs, PPBS attempted; simulation models to evaluate alternatives; program costs analysis; extensive computerization

Source: Inquiry System developments are adapted from Weathersby (1975) in higher education. Combined, these four components of an institutional-management system suggest a useful scheme for categorizing institutional-management needs systematically.

This model views management development as an additive process; as institutions evolve through different developmental phases, their management needs increase in an additive way, by building on the prior management developments. It also suggests an incremental approach to external interventions in institutional management in higher education. If an external funding agency intends to establish objectives for management development in colleges and universities, such objectives should be based on the management needs institutions actually experience and build on the nucleus that already exists within the institution. The model communicates management-development plateaus for institutions in different developmental phases:

--A phase I institution should strive for a planning system that emphasizes short-range planning; an informal-collaborative management system; an evaluation system that provides information about external trends; and an inquiring system that is largely informal and interpersonal, relying on the judgments of organization members.

--A phase II institution should add planning systems that stress long-range planning; formal-management systems capable of maintaining programs; evaluation systems capable of assessing the impact of programs; and a standardized inquiring system.

--Phase III institutions should strive for decentralized planning systems; delegated-management systems; evaluation systems that assess the ability of organizational subunits to attain their planned objectives; and computerized inquiring systems that have reliable costs, workloads and performance data.

--Phase IV institutions should develop system-wide planning capacities; management systems that coordinate this subunit's activities; evaluation systems that prioritize and assess system-wide objectives; and inquiring systems capable of expressing programs as objectives.

According to the model, each subsequent management development builds on the developments needed in the prior phase; each is added to the capacities developed in prior phases. In practice, attaining balance in the phase of structural development and the institutional-management system is a difficult task. It is very likely that one or another component of a campus management system may be underdeveloped. The Valencia Community College case provides an interesting illustration: because its inquiring system is underdeveloped, under Title III its inquiring system is being developed to phase III while most of its other management components are being developed to phase IV.

The Development Matrix, Table V-A, can also be used as a diagnostic tool for external interventions designed to improve institutional management. Once an institution's phase of structural development is determined, using historical and structural information, then the matrix can be used to identify systematically management deficiencies, by comparing the actual management developments at the institutions with those considered appropriate for institutions in that phase. If some of the components of the general management system seem underdeveloped, then the model can be used to identify targets for management-development efforts. For external intervention programs designed to improve management in particular areas, this approach can be used as a diagnostic tool for deciding what types of proposals to fund. The objective of a long-term development program, like AIDP, could be to raise the levels of these management components for institutions in particular structural phases, to those identified by the model.

The intervention model also suggests maximum management-development levels needed by institutions in different developmental phases. A comparison of the inquiring systems at Doane College and St. Mary's Junior College, both considered to be phase II institutions, illustrates this point. Doane College has invested more energy in the development of its inquiring system, including a computerized transactional information system and computerized-standardized information packages capable of model simulation. According to this general intervention model, these developments are more sophisticated than what is needed in a phase II institution. The external evaluators have seriously questioned the need for these developments at Doane. At St. Mary's, in contrast, there has been less formal development of the management-information system and of the computer capacity. Rather than invest in its own computing systems, the college has utilized off-campus machines when possible, thus striking more of a balance with its structural-development phase and the system it implements.

This general intervention model is a tentative one based on the consideration of recent developments in organization theory and on the analysis of the institutional-development efforts at the institutions included in this study. Although specific targets or plateaus are suggested for institutions in the four phases, these should be viewed as tentative, needing further elaboration and development. Even these tentative plateaus, however, can be useful to planning for external intervention programs.

Developmental Strategies

In addition to suggesting an intervention model, the analysis of the AIDP projects at these institutions, when coupled with the analysis of their structural development and management, can be used to suggest general developmental strategies. If the effectiveness of different institutional-management systems vary according to institutions' developmental phases, then we can assume that developmental or change strategies will also vary according to developmental phase. There is evidence in the case studies to suggest that this is the case. A quick comparison of the developmental strategies used by the case institutions reveals the dynamic relationship between strategy, management, and structure.

Phase I: The case studies include no examples of phase I institutions as direct recipients of AIDP funds, although there are examples of phase I institutions contained in the case studies: the Open and West Campuses of Valencia Community College were involved in the VCC's AIDP project.

Phase I institutions are oriented toward the creation of programs and toward informal-management systems. Based on these facts one might assume that the most appropriate development strategies for these institutions would be oriented toward program planning and development. In fact, these were the primary management activities at both VCC campuses, but since they were not direct recipients of AIDP funds, it was difficult to reach specific conclusions about how this general strategy would work.

Even though there are no examples of phase I institutions in the advanced program, and in fact, most of these institutions may be excluded by the Title III eligibility criteria, there is some reason to assume that phase I institutions might make good use of intensive developmental support. New institutions that are technologically more advanced, such as VCC's Open Campus or like the few examination degree programs, may be in need of initial start-up support, but in the long run these institutions may be more efficient, providing more services of similar quality and at less cost than more traditional institutions.

Phase II: Direction phase institutions have more formal organization structures and management systems than creation phase organizations. Consequently, an intensive institutional development effort should have some structure, yet allow for the informal and collaborative processes that take place in these organizations. The two phase II institutions receiving AIDP funds provide interesting illustrations of development strategies that provide some structure but that still rely on the creativeness of the informal system.

At St. Mary's, a steering committee was formed to implement the AIDP project. The committee, which consisted of the coordinators of the various AIDP activities, worked collaboratively on the development effort: they met regularly, weekly, to talk about the entire program and about specific activities; sharing their expertise, providing each other needed interpersonal support, and consciously working changes through the system. They also developed a six-phase implementation process that worked toward integrating successful new activities into the system.

Although the mechanics were different, the general strategy employed by Doane College is similar. One of the vice presidents served as AIDP coordinator. He and other members of the planning team, the primary management group in the institution, oversaw the implementation of the AIDP project. They worked collaboratively, trying to use all of their expertise to solve problems as they arose. In addition, they formed ad hoc groups periodically to tackle specific problems. These groups involved diverse organizational members in program planning and development. At first this was an informal process, but at the time of my site visit the planning team was planning to integrate the ad hoc task-force approach into the planning cycle.

There were important differences in the strategies the two institutions used in their development effort: at Doane the planning team was the primary management group, while at St. Mary's the steering committee was formed specifically to handle AIDP and was not formally a part of the top administrative group. St. Mary's' change strategy of working toward integration of new activities into the structure was much more deliberate than Doane's informal ad-hoc approach. But in both cases, the same elements were present: a team of people took responsibility for implementing the AIDP project; and in each case strategies were developed to work changes into the system.

Phase III: Phase III institutions have organizational structures that are more functionally differentiated than either phase I or phase II institutions: this places greater management needs on middle-management levels than may exist at less complex institutions. In phase III institutions an effective development strategy has to work through the delegated structure, involving middle managers in the implementation process. The case studies provide two examples of phase III institutions that have received AIDP funds, both of which have employed development strategies that involved middle managers in the change processes.

North Carolina A & T is the more complex of the two institutions and although it is currently transitioning to a more complex developmental phase and therefore can use different developmental strategies, the strategies that it has used during the first three years of the AIDP project have been successful and represent the types of change processes that are effective in delegated institutions. At A & T, responsibility for implementing each of the activities is delegated to a coordinator who is a dean, department chairman, program director, or faculty member. These people oversee the implementation process and there is little coordination between them. The AIDP Coordinator and Assistant Coordinator assume responsibility for the entire project.

Xavier University employs a similar development strategy. The AIDP Coordinator works closely with the Executive Vice President on coordinating the AIDP effort. Responsibility for each of the activities is delegated to an activity coordinator, who assumes responsibility for its implementation. Judgments about the success of these activities, and decisions about whether they should be continued after AIDP or whether they should be terminated early because of lack of success, rest with top administration.

Both strategies start with the assumption that to be a success, a change process has to integrate the new activities into the system. In a functionally differentiated system this requires involving middle managers, a level of decision makers that does not exist in less complex organizations, in the change process.

Phase IV: At coordination phase institutions, the primary management-development tasks, developing coordinating capacities, are more complex than in earlier developmental phases. These institutions need development strategies that involve representatives from functional subunits in the implementation process of new activities that affect their operations. Like phase III institutions, they also require that an individual take responsibility for the implementation of specific activities. However, these activity coordinators are more likely to be part of the central administration, rather than middle managers.

Valencia Community College provides the clearest example of a coordination phase institution contained in the case studies. Each of its AIDP activities is designed either to enhance coordination of subunit activities or, if it is a new program, to improve the activities of two or more subunits. Each activity is being implemented in a coordinated fashion, with a committee composed of members from different campuses overseeing the implementation process. In addition, each activity has a person responsible for its implementation. For example, the CID center, designed to improve the instruction programs in the college, has a director who works closely with faculty from the different campuses; the center itself rotates between the East and West campuses. The management developments at VCC under AIDP, those activities designed to enhance the coordinated-management system, are coordinated by individuals as well, usually the director of planning or the Vice President of Instructional Services.

North Carolina A & T also shows some signs of a coordinated-development strategy. The implementation of the academic advising program and the cooperative-education program are both being headed by one individual who is working closely with academic departments and colleges in the implementation process. Recent modification of the institutional planning process, an AIDP-funded activity, suggests that increased coordination in the management system is becoming a priority. The new planning strategy--forming a committee with representatives from different organizational subunits--suggests a more coordinated approach than others the university has employed.

According to the developmental model, coordinated developmental strategies are effective for phase IV institutions--an assumption illustrated by these examples. Phase IV institutions appear to need developmental strategies that allow for coordination between subunits and that provide the leadership needed for implementation.

Conclusions

The analysis of the AIDP projects at selected institutions suggests that the developmental approach has several implications for external interventions in the higher-education management. The Advanced Institutional Development Program was designed to enhance the institutional-development process. It has lacked a conceptual model of development that would maximize the effectiveness of AIDP fund use and that would provide a framework for evaluation. The general model developed here is potentially useful in these ways. It can be used both as a basis for an intervention model, and as a basis for suggesting general intervention strategies for institutions in different developmental phases.

The analysis of the institutional-development programs at these selected institutions showed variations, according to their developmental phases in the types of management developments they implemented. Less complex institutions, those in the direction phase, tended to use AIDP funds to improve institutional long-range planning processes and to improve their program maintenance capacity. Although there was some variation in the way they approached the development of management information systems, it was apparent that these institutions did not have high demands for computerized information. Schools in a medium range of complexity, delegation phase institutions, tried to implement delegated-management systems and had higher demands for computerized management-information systems. Schools that were more complex, coordination phase institutions, used AIDP funds to improve their capacity to coordinate the activities of diverse organizational subunits. These institutions experienced high demands for management information and needed the most sophisticated information systems.

These findings can be used to suggest an external-intervention model, with phased plateaus for institutional-management systems. In this chapter, plateaus were proposed for planning, management, evaluation, and inquiring systems. Based on the analysis in the three chapters it is possible to suggest a scheme that predicts the types of developments in these four areas that institutions in each phase might need. Although this model is tentative, and in need of further elaboration and development, it can provide a basis for planning external intervention strategies.

The analysis of the case studies also provides a basis for suggesting the types of intervention strategies that seem most appropriate for colleges and universities in different developmental phases. Direction phase institutions should employ strategies that allow the formal groups to oversee implementation and that integrate the informal creative process of generating new program alternatives into the formal system. Delegation phase institutions should emphasize development of strategies that emphasize delegation of implementation responsibility to middle managers and employ management-development techniques that improve their management skills. Coordination phase institutions should use strategies that provide coordinators of various activities with the opportunity to work with managers of departments and schools on the implementation process.

CHAPTER VIII

CONCLUSIONS AND IMPLICATIONS

This study has proposed and tested a model of structural development and management effectiveness for colleges and universities. The primary application of this model is for interventions by public and private agencies intended to improve the management systems at these institutions. The institutional development model provides a framework for planning interventions designed to improve college and university management. This work has diverse implications for institutional management and planning, for intervention programs like AIDP, and for future research on institutional development. This concluding chapter has two parts: first, I consider the general conclusions from the three analytic chapters, then the model's implications for institutions, for policy, and for research.

Conclusions

The basic conclusion from this study is that the general model it proposes, which is based on organization-theory and higher-education literatures, is potentially viable and workable. It does need to be refined however. A discussion of the basic components of this model follows. The model as developed here is most applicable to institutions funded in the Title III program since they have comprised the sample. These institutions are not meaningfully different than most other colleges in their characteristics.

Structure. The structural development of colleges and universities can be viewed as a sequential process, with successive phases of structural complexity evolving out of the developments of prior developmental phases. Based on the analysis of these case studies, four distinctively different developmental phases have been identified: a creation phase during which a college's academic programs are organized; a direction phase during which long-range planning and the maintenance of existing programs become the major administrative foci; a delegation phase during which increasing structural differentiation occurs and management responsibilities are delegated to operational subunits, and finally a coordination phase during which the coordination of diverse subunit activities become a major administrative concern. Different structural characteristics are associated with each developmental phase. Continued development is not inevitable, however, nor even necessarily desirable. Instead, the importance of the model is its implications for management and intervention.

The analysis of quantitative characteristics reveals some differences between institutions in different developmental phases. Less complex institutions, phases I and II, tend to be smaller on quantitative measures, while more complex institutions, phases III and IV, tend to be larger on these measures. No single size- or complexity-related variable can be used to identify developmental phases, however. Although ranges that indicate or predict developmental phases can be constructed for several variables, there are exceptions in the case studies for each of the variables considered. Instead the ranges for several variables should be used to predict phases. In the long run, however, if this particular model is to prove to be an effective mechanism for research and intervention, better indicators of structural development should be developed. These indicators should take into account the structural characteristics of the institutions as well as their management systems and management deficiencies.

The most appropriate method of determining the developmental phase of colleges and universities may be through questionnaires with questions about their structure and management. Descriptive questions that describe the types of structural characteristics associated with the various phases could be developed and provide respondents the opportunity to indicate whether they accurately described their institution. In addition, questions about the management systems, organizational problems, management deficiencies, and future plans of institutions could also be used to provide an overview of the state of development of the entire system.

Management. The analysis of the management effectiveness of the case institutions revealed that all five institutions were indeed on the road to implementing viable management systems. Some had faced the most basic issues of survival. They had been confronted by management problems, including the improvement of their fiscal management and the realignment of institutional aspirations so to be concomitant with their financial capacities. Others deliberately experimented with different management systems; some had even developed unneeded management capacities. Each case study demonstrated, however, that the development of a viable management system is an incremental process of adapting the standardized management packages and procedures to the uniquenesses of a particular campus. Each appeared to be on the road toward the development of an effective management system.

A developmental approach to the study of management effectiveness, building of the general model of institutional development, demonstrates why some management developments seem more appropriate for some institutions than for others.

—Phase I institutions need a loosely-structured management system that relies on individual interactions and on consultation among organization members. The primary management needs for phase I institutions are for people who are aware of external trends and who can initiate new programs.

—Phase II institutions have greater needs for formalized management: the capacity to maintain programs, to generate long-range plans, and to insure that new program development can continue in a more formalized fashion.

—Phase III institutions are more complex structurally than either phase I or phase II institutions: they have more structural subunits which have their own management needs. They need management systems with a capacity to delegate planning and management responsibilities to these subunits and to develop formalized administrative policies and procedures.

—Phase IV institutions need to develop a coordinated management capacity, including a system-wide planning process that sets system-wide objectives and priorities; a system capable of developing programs across organizational lines; and administrative services that administer to the needs of diverse subunits.

There is a dynamic relationship between an institution's structural characteristics and the types of management needs it is likely to experience. The more complex an institution is structurally, the more complex its management needs are likely to be. Conversely, the less complex an institution is structurally, the less complex its management needs are. In this study, institutions that appeared to be within given developmental phases, appeared to have management needs that corresponded with those phases. The structural development sequence identified in the analysis seems invariant, an institution is not likely to enter an advanced phase without having passed through a less complex phase. Some institutions may pass through phases faster than others, however. These same principles are true even when the instructional technologies of an institution might vary. For example, St. Mary's Junior College and Valencia Community College's Open Campus, both of which have advanced instructional technologies, appear to have faced the same organizational dilemmas as other creation phase organizations studied. St. Mary's Junior College seems to have progressed further with the types of structural developments that characterize phase II organizations, however.

Although a general sequence of structural development and corresponding management systems can be identified, there is no evidence to suggest that continued structural development is inevitable. The cases of Doane College and St. Mary's Junior College illustrate this point. Doane is the oldest institution studied, yet it is the least complex structurally. The phase I-phase II transition it has recently experienced gives it the administrative capacity it needs for the future. St. Mary's, although considerably younger than Doane, has made a similar structural transition. It has plans to limit growth, however, which suggests that the phase II organization structure may be compatible with its future direction.

There is evidence to suggest that management needs are hierarchical in the sense that institutions within one developmental phase will have to address the unmet management needs of prior developmental phases in order for the management needs associated with its actual developmental phase to emerge. For institutions in more complex developmental phases, the management needs of prior phases can be viewed as basic management needs. This is especially true for institutions that have developed structurally without necessarily undertaking the types of management developments that are associated with prior structural transitions. These colleges and universities may have added new schools and colleges or campuses without changing their management systems. When operations become too expensive and more efficient management is needed, then the task of management development will have to be approached incrementally, addressing successive sets of management needs as they emerge. All of the phase III and IV organizations in this study--VCC West Campus, Valencia Community College, North Carolina A & T, and Xavier University--face the management dilemmas of several developmental phases simultaneously.

Although there are not examples contained within the case studies of institutions that have transitioned from more complex to less complex developmental phases, this remains a distinct possibility. There is no evidence in the case studies to suggest that this is not possible. In the next several decades many colleges and universities in this country will have to adjust to declining enrollments. Decreasing the structural complexity of the institution is a decision within the control of institutional planners and administrators. A university could, for example, decide to abolish or combine several of its undergraduate and graduate schools, thus making a transition from phase IV to phase III possible. An institution that chooses to make such a transition would probably have less complex management needs than it had previously and therefore might be able to streamline its administration to make it more efficient.

We saw one example of an institution that streamlined its administration when it had overdeveloped in a particular area: St. Mary's Junior College had created a development office that was too elaborate--it did not need as sophisticated a development effort as was originally created; after two years of experimentation, it streamlined the office to make it more compatible with the needs of the campus. This type of backwards development, of streamlining organizational structures so that unneeded functions are eliminated, may be a necessity in the future.

Intervention. The participation of the case institutions in the Title III advanced program provides a unique opportunity to examine the interrelationships between structural development, management effectiveness, and external intervention. The AIDP program is designed to facilitate the development of viable institutional management systems: there is evidence in the case studies to suggest that AIDP is a major force, assisting the case institutions along the road toward better management. Although this does not suggest that all 120 institutions funded in AIDP over the past five years are as fortunate, it does provide a basis for designing interventions based on the general institutional development model.

Institutions vary considerably in the ways they approach the task of institutional development. Some of this variance is explained by their relative phase of structural development: phase II institutions needed to create management teams to oversee the implementation of the institutional development program; phase III institutions needed to delegate responsibility for specific activities to middle managers who were activity coodinators; and phase IV institutions needed to develop systems to coordinate the institutional development effort.

In addition to identifying the types of institutional development strategies that appear most effective at institutions in different phases, the analysis provides a basis for proposing management development targets for institutions in each phase. The common elements of the AIDP projects at the case institutions--the implementation of the planning, management, and evaluation systems and of management information and transactional information systems--provide the basis for such a model. Four specific management developments--planning, management, evaluation, and inquiring systems--were considered; each varies according to an institution's developmental phase. The descriptions of these proposed management developments for institutions in each phase were given in the previous chapter.

The goal of an intervention program that uses this model would be to develop systematically all four components of a campus management system. Institutions would be encouraged to keep their inquiring systems consistent with their planning, management, and evaluation systems. .It is fortunate that AIDP has encouraged institutions it funds to develop all four aspects of their management systems, since this has made it possible to develop the four-component intervention model. However, in the past the program has lacked the sophistication to suggest the types of management developments in these areas that are most appropriate for institutions with different structural characteristics. Without such a scheme, there is a higher risk of encouraging institutions to overdevelop some management capacities while underdeveloping others.

Implications

This research provides a useful development model that has direct implications for higher-education institutions, for policy toward institutional development, and for future research. The general model as presented and developed in this study is tentative and exploratory; it needs further research and development. When considering its implications, however, these limitations are not of major concern.

Institutions. The general model has the most direct implications for higher-education institutions, especially if it is further tested and substantiated. During the next decade the conditions facing colleges and universities will probably worsen; the financial crisis of the early seventies has already turned into a lasting condition of continuing financial stress. Higher education is no longer a favored agenda item for public expenditures; most states face the possibility of having overdeveloped their higher-education systems. At the very least, in this stressful situation, the management needs of institutions are great.

The general model proposed here provides a basis for decisions by institutional managers about the implementation of management systems and procedures that effectively address their institution's management deficiencies. Management development is an incremental process; as one set of management needs are addressed, another set will emerge, until a relative balance is reached between the demands placed on the system by its structure and the capacity of its management system to meet those needs.

In addition to these implications for management development, the model has implications for organizational design. The case studies illustrate structural development as a process of becoming increasingly structurally complex. They also illustrate the difficulties some institutions are having meeting their growth plans. The model has implications for backwards movement or for becoming less complex as well.

The implications of the model for institutions facing the prospect of continued structural growth are obvious: institutions that effectively organize within a particular phase are more likely to have continued success. The case studies illustrate this quite well: each institution has made some transitions along the structural sequence. As continued enrollment becomes less likely, however, so will the likelihood of continued structural development.

Institutions that face the prospect of cutting programs, schools, and campuses can use the model as a basis for organizational redesign and for streamlining the organizational structure and management system. Each of the structural and management transitions described in the case studies can be viewed in reverse if necessary: a small multi-campus system can reorganize to form a stronger single-campus institution; a multi-college university can reorganize to form stronger single-college institution; or a small college facing enrollment declines might streamline its academic and administrative structures to the point where little formalized management is necessary.

Policy. Public policy toward higher-education institutions will have to make numerous transitions during the next decade: where growth was once stressed, adjustment to declining enrollments should become a major concern. As a means of helping institutions deal with the stressful conditions ahead, public or foundation support should be given to institutions to help them make necessary transitions in their organization and management in order to deal effectively with the stressful condition. The case studies illustrate the situation of stress facing all institutions; even institutions considered to be exemplary in their institutional development efforts have to readjust their aspirations to deal with the new condition.

The Title III basic and advanced programs are potentially capable of dealing effectively with these types of issues. Their emphasis should gradually shift, however, from stressing continued growth, as the eligibility criteria now do, to stressing improvement of institutional capacity to survive at their present or perhaps a reduced size. Size should not be a funding criterion. Instead, the applicability of what institutions plan compared to their actual needs should be considered. In this new condition, institutional demands for monies from programs like Title III will increase faster than available resources; this is inevitable. Colleges and universities that were once in good financial condition now appear to be in trouble. Under such conditions intervention programs like Title III should probably separate the types of criteria it uses for eligibility and from those it uses for funding, since some particular institutions may be considered most disadvantaged, but under no condition should growth criteria be used for either. Funding criteria should stress the viability of institutions' development plans. Eligibility criteria should provide a means of identifying those institutions that face the most basic challenges for survival, possible criteria might include expenditures per student or percent low income enrollment. Funding criteria, however, should consider the feasibility and the appropriateness of the actual plans given institutions intend to undertake.

Policy objectives should emphasize management development rather than structural development. Chapter VII provides a specific intervention model for a program designed to improve the management effectiveness of colleges. It provides general descriptions of the types of management developments that should occur in four areas if an institution is to have a viable management system. These management developments are differentiated into different plateaus for institutions in different development phases. Each plateau includes descriptions of the management developments that are appropriate in each phase. In general, such a model could provide a useful basis for a program like Title III that is designed to develop college and university management systems.

Even if an institutional-development model such as the one proposed here is used to establish funding criteria, an element of professional judgement will still be necessary in the funding process. This study was based on the examination of the AIDP projects at exemplary Title III-funded institutions. An important, perhaps intangible, factor operating at each of the case institutions was the presence of high quality and committed top leadership. Without the support of competent top executives, it is possible that no amount of external money would bring about qualitative change in management or other areas. Those people considering proposals should be cognizant that intangible factors are as important as the specific outcomes proposed in an institution's funding proposal.

Research. It is for research that this study possibly has the most implications. I proposed and pilot-tested a new method of viewing the institutional-development process in higher education. The severity of the new conditions facing colleges and universities require new images of what is possible and exploratory research into what is feasible. This has been an exploratory study. The conclusions reached are limited and tentative, yet its possible implications are great. It is the challenge of further research, perhaps of future studies of the Title III program, to improve this new way of viewing institutional development.

A major question is left unaddressed by this study. I have examined a few exemplary institutions and based on this analysis have developed a model that has possible implications for other developing institutions and for intervention programs. There is a precedent for this approach in organizational and education-policy research. Nevertheless, its weaknesses need to be clearly stated. The generalizability of a model developed from the intensive examination of a few case studies is at first quite limited. It is the task of further research to develop the model. A tentative model of this nature should not be used as a basis for intervention without incorporating research on the basic model. Two types of future research are necessary.

First, the model should be tested with case studies of more diverse institutions. This study has been limited to exemplary institutions--those considered by U.S.O.E. experts to be doing a good job. Will the model work with institutions that are not doing as well? This analysis suggests that it will, since even these exemplary schools have not done well in all aspects of their institutional development process, and many of their shortfalls are explained by the model. However, this should not be left to speculation. In this study two- and four-year, public and private institutions were examined. Some differences were found. For example, two-year colleges appear less likely than four-year institutions to develop a structure that houses several schools and colleges on the same campus. Whether or not this finding, or findings of this type, will have implications for the general sequence is uncertain. In any event, a more diverse set of institutions should be examined using the case method.

Second, better methods of gathering cross-institutional data need to be developed. The current Title III application and award data base and other large national higher-education data bases do not include the types of historical and structural variables that would allow researchers to test developmental models. Structural data is not collected. Some of this information--like the numbers of departments, schools, and colleges--is easy to collect. Some size-related variables that are helpful, like the number of faculty and administrators, are collected, but not consistently. In addition, cross-institutional surveys polling institutions funded in Title III or other intervention programs should include questions about management practices and about other aspects of the institutional-development process. There should also be questions about the organization and implementation of the institutional development project as well.

Finally, if the developmental model proposed here is to prove useful in the Title III funding cycle, it will need to be expanded to include the other development areas, in addition to management, that are emphasized by Title III. Specifically, the academic development and student-services components of the AIDP program should be integrated into the general model. Of primary concern here is, whether or not the specific types of student-services and curriculum developments are likely to be successful at some institutions more than others and, if so, can these be differentiated by institutional phase? The analysis of the overall institutional development efforts at the case institutions, discussed in the previous chapters, suggests that there is a direct relationship between the most effective development strategy and the phase of structural development. Whether this can be expanded to include more information about other AIDP components is still uncertain. However, these relationships need to be explored in more depth.

Ideally, if this model is to be used as a basis for intervention, a study of Title III should be organized that uses this developmental model as a basis. Technical Appendix II proposes a design for such a study. It should start with case studies of a group of diverse institutions, with different types and controls and with different degress of success with the program. For purposes of control and comparison, institutions not funded by the program should be studied as well. The institutional-development efforts in these institutions should be followed for at least a year while a cross-institutional survey instrument is developed. The case institutions can also be used to pilot test the questionnaire to insure its usefulness. Then, during the second or third year of the study, the case institutions should continue to be studied using a longitudinal case study approach, while the questionnaires are administered to other institutions in the program and to some not in the program. A limited number of the institutions surveyed that were not included in the original case-study group should be visited during the survey and analysis period to provide comparison between the results of the case studies and the results of the survey.

TECHNICAL APPENDIX I: RESEARCH FRAMEWORK

Testing the development theory of institutional change in higher education requires the development and analysis of institutional case studies. Existing data bases do not include the types of structural and historial variables needed to test a developmental model (Weathersby, Jackson, Jacobs, St. John, and Tingley, 1977). Although new surveys would allow researchers to collect data of this nature, it would only allow for the exploration of correlational relationships. This investigation has used in-depth case studies to try to attain causal data on the relationship between structural development and management effectiveness.

In order to test the development model, this investigation must be comparative and historical. The historical dimension will allow the researcher to view the evolution over time of the organization, of its subsystems and of its interactions with the external environment. The comparative approach is "based on the empirical study of management activities in two or more firms in an effort to develop guides for predicting what will work reasonably well in comparable situations" (Maissie, 1965, p. 415).* Some of the most-noted studies of management practices in industrial organizations have used a comparative historical approach (see, for example, Chandler, 1962; and Dale, 1960).

To test this particular model of institutional development, I developed institutional case studies along five dimensions: the overall state-of-development of the organization; its structural history; its current phase of structural development; the development of its management system; and the effectiveness of its management. An elaboration of the dimensions follows.

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* See Udy (1965) for an excellent discussion of comparative organizational research.

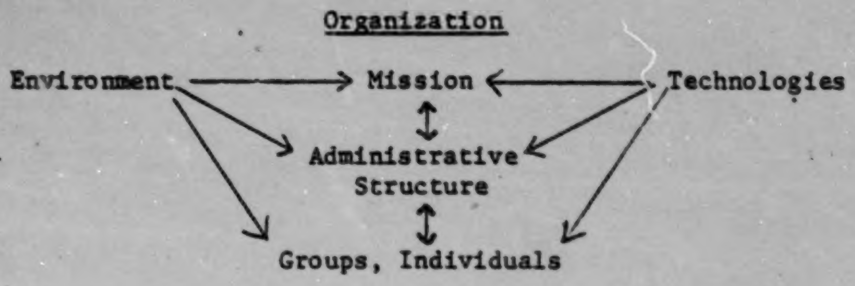
State of Development

The structure and management of an organization should be considered in the context of the state-of-development of the organization as a whole. The diversity of higher-education institutions is considerable and structural complexity or development is just one continuum along which these organizations and their development vary. To consider the state-of-development of the system as a whole, a researcher must consider the various components or subsystems of the organization. In this study, I use the basic organizational model illustrated in Figure A-1, which is adapted from Udy (1965) and Baldridge and Deal (1975).

According to this model, each organization can be defined and described in terms of its subsystems: technologies, environment, mission, administrative structure, and groups and individuals. For higher-education institutions, these can be defined as follows:

Environment: Colleges are subject to local, state, and national influences. The overall condition of higher education in the United States, the subject of chapter two, influences all colleges. In addition, other external factors influence colleges: states support public and private higher education in diverse ways; changes in local economies affect colleges; and the growth rate of surrounding communi-

Figure A-1. Organizational Subsystems


Organization
Environment
Mission
Technologies
Administrative Structure
Groups, Individuals

Sources: Adapted from Udy (1965) and Baldridge and Deal (1975).

ties affects the demand for institutional services.

Technologies: Every organization has a technology for carrying out its work activities. In higher education, instruction, research, and community services are usually the primary activities of the organization. Although most colleges use traditional technologies in their activities, especially in instruction, there have been many innovations in these areas in the past decade. In addition, colleges are subject to shifts in external technologies that can create the need for new or different types of educated personnel.

Mission: The goals or mission of an organization affects its relationship with external constituencies and technologies, as well as its internal activities. Higher-education institutions have diverse missions: liberal arts, technical education, professional education, preparatory education, etc. A campus can define its mission as all, one, or some of these, and the future prospects of a college will vary according to its mission.

Administrative Structure: This refers to the formal organizational structure of the institution. In higher-education organizations this refers to the formal functional differentiation of instruction, research and service activities into colleges, departments, and institutes as well as to centralized administrative subunits.

Groups, Individuals: In higher education, groups and individuals include students, faculty, administrators, staff, trustees, and external constituents. The interactions among and between these groups is the essence of the functioning of a college.

Case studies developed to test this model of institutional development take these various aspects of the total state-of-development into account and therefore, do not focus entirely on structure and management. They include the general statement about each of these subsystems and this total organizational context is taken into account in these analysis.

Structural History

Documenting the structural history of case institutions is essential to the application and testing of this institutional development model. The five factors Greiner proposes to identify the developmental phase of industrial organizations are history-related: age, size, previous evolutionary periods, previous revolutionary periods, and the growth rate of the industry. It is Greiner's view that "the future of an organization may be less determined by outside forces than by the organization's history" (1972, p. 38). A comparison of previous periods of prolonged-gradual growth, periods of rapid change, and accompanying structural and management changes for several colleges is necessary to identify a general sequence of development.

To the extent possible I have documented the structural history of case institutions. At the very least, this includes the milestones in the structural development of the institution. When possible it also includes the addition of new academic programs, colleges, and campuses as well as the development and reorganization of formal administrative units and functions.

Administrative Structure

The identification of developmental phases requires an in-depth examination of the formal structure of the organization. In addition to a functionally differentiated academic structure, on most campuses there is an administrative structure which is functionally subdivided into areas -- like student services, budget and finance, development, physical plant, etc. The operation and management of the entire organization is considered in the case studies. The various components of the organizations are described. In the analysis small organizations are compared to subunits of large organizations, to explore further the implications of the model.

Management System

Traditional management theory has "generally included the formal structure of organization and process of general management" (Massie, 1965, p. 387). Technically, therefore, management can be described as a process of coordinating the various organizational subsystems (technologies, structure, individuals, etc.). In higher education, formal management _per se_ has not received much attention until recently, although the more general process of governance has been the subject of considerable dialogue.* Both considerations, formal management and informal governance processes, are important when trying to describe higher-education management systems.

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* Institutional governance has been an important part of the literature on higher education for the past two decades. Corson (1960) was the first to popularize the term. His work considers the formal organization and delegation of authority in colleges in considerable detail. More recent reviews of the governance literature include McConnell (1971), Hodgkinson (1971), and Wilson (1969).

Formal management practices include planning, management, and evaluation systems, computerized information systems, and various other budgeting, financing, and costing mechanisms. In the past five years many colleges that have not previously done so have begun to approach institutional management in a more systematic way. This typically includes the implementation of formal planning and budgeting techniques and the computerization of existing information sources to make them more readily available to decision makers. Formal management also includes the implementation of formalized policies and procedures for complex institutions lacking these developments, or the implementation of formalized coordinating mechanisms, such as a centralized planning office.

The less formal governance processes of the institution are an essential part of the management system as well. In higher education, most financial resources are typically committed to staff, usually faculty. Faculty usually have considerable control over what they teach and how they teach it. The amount of control faculty have over their own affairs does vary in higher education. For instance, in one study, Platt and Parsons (1970) found "that increasing differentiation enhances departmental autonomy and control over policies directly related to its own operation, although on important policy issues such as educational and particuarly financial policy, the administration and trustees play a very influential role" (p. 149). These less formal arrangements within institutions influence operation and management and must be considered when describing a college or university system as well.

Management Effectiveness

The effectiveness of a campus management system must also be considered in the development of institutional case studies if the comparative analysis is to determine the types of management that are appropriate for campuses in different developmental phases. Management effectiveness is not easy to measure, however, and for higher education criteria that could be used to measure effectiveness have not uniformly developed. The Hodgkinson-Schenkel study (1974) of the effects of Title III used eight measures of management effectiveness, ranging from Leadership Dynamism and Efficiency to Community Relations, for a developmental model for Title III funded institutions. These were only dealt with in an impressionistic fashion for the development and analysis of the case studies. Cheit (1972) in his study of the financial health of colleges, matched institutional goals with financial capacity as a measure of financial health. This method, although useful when considering the financial condition of colleges, is of questionable value as a measure of effective management, since the reasonableness of institutional aspirations should be taken into account as well.

In the absence of standardized criteria for measuring management effectiveness in higher education, I consider management effectiveness along five dimensions in the case studies. Again these measures are impressionistic and descriptive. However, they are the best measures available. The institutions used as case studies were considered exemplary for the management by the Title III staff. As descriptive indicators of management effectiveness, these measures provide a basis for comparing structural development and college management needs. These indicators are:

(1) Attention Paid to Management Needs: In his restudy of the financial health of colleges, Earl Cheit (1973) found improvement in the financial condition of several campuses previously headed for financial difficulty, not because of increased income, but because of a growing awareness that better management was needed. In the past, colleges have not paid attention to nor set up systems to address their management deficiencies. In these descriptive case studies I have considered if and how well these institutions have diagnosed their management needs.

(2) Implementation of Viable Management Systems: Implementation of viable planning and management practices is not an easy task in higher education. There are now numerous planning and management packages and consulting firms that specialize in particular practices or techniques. Selection of the appropriate management tools is not always an easy task, nor is the adaption of these standard practices and instruments to an individual campus. A description of this implementation process is included in each of the case studies.

(3) Effective Resource Use and Planning: Increasingly, colleges need to develop strategies for using existing resources in more efficient ways. In the face of leveling or declining enrollments and increasing costs, colleges have had to cut back on faculty, merge with other insitutions, or, in a few cases, close their doors. A descriptive study of management effectiveness should consider the ability of the campus management systems to effectively plan, develop, and utilize financial resources.

(4) Quality and Effectiveness of Constituent Involvement: Effective management in higher education requires the effective development and utilization of human resources. The degree of involvement of different constituent groups in planning and decision making processes is an important factor to consider in a study of management effectiveness. (5) Renewal Capacity: This is the most vague of the criteria proposed here, but perhaps the most important. In a rapidly changing environment -- the condition facing most colleges, even the most traditional, often now find themselves in -- the capacity of the institutions to regenerate themselves, to find new directions, and to create new alternatives is a key to survival and success. An important indicator of the effectiveness of a management system should be the capacity of the management system to facilitate renewal processes.

The Case Institutions

This study presents case studies of five institutions funded in the Advanced Institutional Development Program are: Doane College (Crete, Nebraska); St. Mary's Junior College (Minneapolis, Minnesota); Xavier University of Louisiana (New Orleans, Louisiana); North Carolina A & T State University (Greenboro, North Carolina) and Valencia Community College (Orlando, Florida). The remainder of this Appendix discusses the selection of the institutions used for case studies and compares them with other colleges and universities funded in the Advanced Institutional Development Program (AIDP).

AISP comprises slightly over half of the budget for the Title III program which is part of the Higher Education Act of 1965. Between

1973, when the advanced program was initiated, and 1976, 120 institutions had received AIDP grants. These awards are usually $1 million to $3 million grants extending over a five year period. In most respects the institutions selected for case study do not differ from other AIDP schools. Criteria used for the selection of school for case study were as follows:

Exemplary Institutions - Since I wanted to identify a relationship between phases of structural development and the appropriateness, or effectiveness, of campus management systems, I selected institutions that are considered exemplary in this regard. These institutions were judged exemplary by the AIDP staff both for the effectiveness of their management and for their use of Title III funds. The management effectiveness of case institutions is considered in the case studies.

Structural Diversity - I selected institutions in three of the five phase categories. The current eligibility criteria exclude phase I institutions due to age and size restrictions. Phase V is still only a possibility in higher education, and since the most advanced institutions would not be funded by Title III, phase V schools were not included in the study. Therefore, I selected at least one institution in each of the three remaining categories (phases II, III, and IV). To insure this likelihood I compared what is already known about the structure and management of cadidate institutions with the general phase descriptions when reviewing the AIDP files.

Geographic Diversity - I wanted to study institutions in different geographic locations. I felt this would increase the likelihood that all of the institutions selected would not be subject to the same external influences.

A fourth criteria, selecting institutions with similar type (two-year, four-year) and control (public, private) coding was considered. After reviewing the AIDP files for eighteen institutions selected by the AIDP staff as possible institutions for case study, I found it would be difficult to meet the type and control criterion. Private colleges funded in the program did not appear to vary as much in their structural characteristics as public institutions. However, it would be difficult to find enough either two- or four-year public colleges that meet the other criteria, since private four-year schools were the dominant category. I also found that colleges with different types and control codes seemed to have relatively similar structural characteristics if they appeared to be in the same phase. For instance, the three institutions in the original eighteen that I categorized as making a phase I-II transition prior to or during the funding period varied in type and control--a two-year public, a two-year private, and a four-year private--but appeared relatively similar in their structural characteristics.

After reassessing this situation, I decided to select schools with different types and controls in order to select structurally diverse schools. An examination of the literature on comparative-organizational research suggests that the original criterion may have been too narrow. Some of the most noted comparative studies of industrial organization use organizations with diverse products, and often compare public utilities and private firms (for example see: Chandler, 1962; and Dale, 1960). Also, most comparative studies of higher-education organizations are not restricted in this regard. Therefore, institutions selected for the study are of mixed types and controls.

To develop the case studies I used a combination of data sources. United States Office of Education (U.S.O.E.) files on the case institutions were reviewed and site visits were conducted, which allowed for interviews and personal observations. In addition, a variety of documents were supplied by the campuses. The steps involved in developing the case studies were:

1. Identification of Case Institutions: Schools were chosen according to three criteria from a list of eighteen exemplary institutions. U.S.O.E. files were reviewed during the selection process.

2. Contact Institutions: Soon after their selection, the institutions selected were contacted and asked for assistance by providing documents for review and arranging for site visits.

3. Review Available Material: I reviewed all documents relevant to selected institutions in Office of Edcuation files and Harvard libraries in addition to those provided by the campuses.

4. Develop Institutional Profiles: Before I visited the campuses I wrote a historical-structural development profile for each campus, which tentatively identified the development of each case institution.

5. Site Visits: Three-day site visits were scheduled for interviews and document studies at each case institution.

6. Write Case Studies: I wrote case studies based on interviews and document studies. Drafts of case studies were reviewed by campus representatives for factual accuracy.

Tables A-1 through A-4 compare selected institutions with other similar Title III-funded institutions on selected variables. Table II compares St. Mary's Junior College with other institutions funded in Title III in 1972-73. Since 1973-74 and 1974-75 data for St. Mary's was not in the Title Application and Award Data Base more recent comparisons were not possible. Table III compares Valencia Community College with two-year public institutions funded in AIDP in 1974 and 1975; since Valencia did not receive AIDP funding until 1976, it was not included in the cohort it is compared with. Table IV compares Doane and Xavier University with other four-year private institutions funded in AIDP in 1973 and 1974; since Doane was not funded until 1976, it is not included in the comparison group. Table V compares North Carolina A & T State University with other four-year public colleges funded in AIDP in 1974 and 1975. Three variables(total FTE enrollment, total education and general expenditure, and total education and general expenditures per FTE)were chosen because of their comparability to other data bases (i.e. HEGIS Enrollment and Finance) and because they are relatively good indicators of the level of institutional activities.*

In funding year 1973, the year before AIDP started, St. Mary's Junior College did not differ much from other Title III-funded private

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* For a description of the Title III application and award data base see St. John, Tingley, and Gallos (1977).

Table A-1

Comparison: St. Mary's Junior College And Other Title III-Funded Institutions

Variable	Year	St. Mary's	Title III Two-Year Private Institution
Total	72-3M	781	635
FTE	SD	0	758
	N	1	47
Expenditures*:	72-3M	1,587	956
Total for Ed.	SD	0	1,160
And General	N	1	37
Expenditures*:	72-3M	2.0	1.6
Ed. and Gen. Per	SD	0	.8
FTE	N	1	47

* In $1,000 increments

SOURCE: Title III Application and Award Data Base and St. Mary's AIDP Application

Table A-2

Comparison: Valencia Community College And Other AIDP-Funded Institutions

Variable	Year	Valencia	Other AIDP Two-Year Public Institutions
Total	73-4M	3,690	4,486
FTE	SD	0	1,736
	N	1	5
	74-5M	4,076	2,864
	SD	0	1,963
	N	1	16
Expenditures*:	73-4M	4,001	7,271
Ed. and Gen.	SD	0	4,141
Purposes	N	1	5
	74-5M	4,893	4,462
	SD	0	3,656
	N	1	16
Expenditures*:	73-4M	1.1	1.6
Ed. and Gen Per.	SD	0	.5
FTE	N	1	5
	74-5M	1.2	1.6
	SD	0	.9
	N	1	14

* In $1,000 increments

SOURCE: Tit;e III Application and Award Data Base

Table A-3

Comparisons: Doane College and Xavier University With AIDP-Funded Institutions

Variable	Year	Doane College	Xavier University	AIDP Funded Priv. Four-Year Institutions
FTE Total	73-4M	623	1,426	1,547
	SD	0	6	621
	N	1	1	12
	74-5M	613	1,646	1,363
	SD	0	0	708
	N	1	1	26
Expenditures*: Ed. and Gen.	73-4M	1,478	4,394	4,779
	SD	0	0	3,162
	N	1	1	12
	74-5M	1,457	4,689	4,009
	SD	0	0	2,584
	N	1	1	26
Expenditures*: Ed. and Gen. Per. FTE	73-4M	2.4	3.1	3.0
	SD	0	0	1.0
	N	1	1	2
	74-5M	2.4	2.8	2.7
	SD	0	0	.9
	N	1	1	24

* In $1,000 increments

SOURCE: Title III Application and Award Data Base

Table A-4

Comparison: North Carolina A & T State University and Other AIDP-Funded Institutions

Variable	Year	North Carolina A & T State Univ.	AIDP-Funded Four-Year Publics
Total	73-4M	4,214	2,804
FTE	SD	0	1,820
	N	1	5
	74-5M	4,116	3,633
	SD	0	1,947
	N	1	13
Expenditures*:	73-4M	11,111	7,117
Ed. and Gen.	SD	0	1,119
Total	N	1	5
	74-5M	12,657	4,462
	SD	0	3,650
	N	1	16
Expenditures*:	73-4M	2.6	2.1
Ed. and Gen. Per.	SD	0	.5
FTE	N	1	4
	74-5M	3.1	2.5
	SD	0	1.1
	N	1	12

* In $1,000 increments

SOURCE: Title III Application and Award Data Base two-year institutions. Its total FTE enrollment, total expenditures for education and general, and expenditure for education and general per FTE were slightly larger than the other two-year private institutions, although less than a standard deviation.

Valencia Community College is similar to the two-year public colleges funded in 1973 and 1974. Its total FTE enrollment was slightly less in 1972-73 and slightly greater in 1973-74, although not as much as one standard deviation. Its total expenditures for education and general purposes were less than AIDP-funded institutions in 1973-74 and were slightly more in 1974-75. Expenditures for education and general per FTE were one standard deviation less than the mean in 1973-74 and were still less in 1974-75, although not by a standard deviation. Valencia has continued to grow at a rapid pace, however, and may be larger than these same schools today.

Doane College is smaller, in terms of its level of activity, than private four-year institutions funded in 1973 and 1974. In 1973-74 and 1974-75 its FTE enrollments differed by more than a standard deviation. Its total expenditures for education and general purposes were more than a standard deviation less in 1973-74. Its expenditures per FTE were slightly less than comparable institutions, although not a standard deviation.

Xavier University appears near the average in all of its activity indicators. Its total FTE enrollment, expenditure for education and general purposes, and expenditures for education and general purposes per FTE were all within the average range for the two years compared.

North Carolina Agricultural and Technical State University is larger and better funded than other public four-year colleges funded by AIDP. Both year's total FTE enrollments were larger than average, although not by a standard deviation. Its expenditures for education and general purposes, however, are more than two standard deviations above the average for both years. Its expenditures for education and general purposes per FTE were above average for both years, and a standard deviation above average for one year.

In summary, the selected institutions appear to be near average in their activities when compared to other AIDP/Title III-funded institutions and when type and control are taken into account. One of the schools, Doane College, appears smaller than average and one, North Carolina A & T, appears larger. Education and general purpose expenditures per student vary slightly, with one institution, North Carolina A & T, being above average and another, Valencia Community College, being less than average. Overall, there is no reason to consider these schools different as far as their activity levels are concerned, although they do represent a range in this regard. The only major differences that can be attributed to these institutions are the judgement on the part of the AIDP staff that they were doing an exemplary job in their use of Title III funds and in their management effectiveness.

TECHNICAL APPENDIX II: STUDY DESIGN

This appendix outlines a possible future study of Title III that utilizes the institutional development model proposed here. The purposes of the study are: to estimate the effects of Title III on funded institutions by using a combination of case studies and surveys; to provide useful information to the Title III program staff to improve the funding process; and to improve the general intervention model so that it is more useful to the Title III program staff and to funded institutions. The design suggests a two-year study, although additional time may be necessary, depending on the timing and execution of the project. At least two years would be required, however, to develop and to analyze case studies and to design, administer, and analyze the survey.

I. Case Studies: Year One

Appendix I provides some detail on the case method utilized in the pilot study reported here. The same basic procedure is recommended for a further investigation. The steps in the procedure would be as follows:

1. Selection of case institutions. In the pilot study, exemplary institutions were used for case studies in order to test the general model. In a future study of Title III, institutions should be selected for case study that are representative of all Title III-funded institutions. There are twelve possible catagories of institutions to select from when the researcher considers type (two year, four year), control (public, private), and funding status (basic, ad-

vanced, non-funded). At least one, possibly two institutions in each category should be selected, with a total number of case institutions ranging between twenty-five and thirty. This large number of institutions will be necessary to get variations in phases of development, as well. The expertise of Title III program staff can be utilized in selecting institutions for case studies. It is next to impossible to get a truly random sample of institutions using the case method; therefore, an effort should be made to select representative institutions. I recommend that the Title III program staff be involved in suggesting institutions for case study because they are the most familiar with the institutions funded in the program. From a relatively large list of possible institutions, the researchers can select a set of institutions utilizing predetermined selection criteria. Possible criteria might be: (1) diversity in type, control, and funding; (2) geographic diversity, and (3) diversity in phase of structural development. Title III applications could be reviewed to facilitate the identification of possible institutions. The variable ranges suggested in Table III-C could be used to identify tentative phase designations if quantitative measures were used to select institutions.

2. Contact Institutions. After their selection, institutions should be notified of their selection for case study and asked to supply supporting documents on the institution and its Title III projects. The procedure used in the pilot study seemed adequate: have a person from the Office of Education notify the school of its selection for case study, then follow with direct contact from the research-

er. This initial notification should include a brief description of the study and its purposes. Follow-up contact can be made through telephone, mail or both.

3. File Reviews. Available materials should be reviewed in advance of the site visits. Office of Education files on the case institutions should be reviewed. The Title III program keeps files on each funded institution. These usually include applications, monitoring files, and evaluation reports. In addition, available library materials on the institutions and other materials provided by the institutions can be reviewed.

4. Institutional Profiles. In the pilot study, a brief five-page profile was written for each case institution, which approximated their phase of development. This extra step allowed the researcher to develop a sketch of the organization and its major actors prior to site visits.

5. Site Visits. Two site visits of two or three days are recommended for each institution used for case study. In the pilot study, one two-day visit was made to each selected institution. This was ample time to investigate the organization structure, meet several administrators and faculty, and research the management system in use at the institution. If a more substantial study is being conducted to determine the effects of Title III, a second visit is recommended so that the researcher can interview Title III project staff at the various institutions. The second visit, if scheduled six to eight months after the original visit, would allow the researcher to view some changes over time. Additional site visits to some of the

institutions might be arranged during the second year of the study, particularly if an institution was in its early stages of an AIDP project during the initial visits.

6. Develop and Analyze Case Materials. Analysis of case materials probably will not be complete until the end of the project, although there are some types of analysis that would be useful to conduct early. In particular, analysis of some of the Title III components other than the management area can be analyzed and fed into the questionnaire development process.

II. Questionnaire Development: Year One

Simultaneous to development of the case studies, a questionnaire that utilizes a variety of measures of institutional development should be designed and pilot tested. Three general types of questions should be included in this survey instrument, which should eventually be sent to all Title III-funded and sample non-funded applicant institutions. These include: quantitative measures of institutional change; survey questions of structural and management development; and specific sets of questions dealing with the different types of programs and projects funded by Title III.

Quantitative Questions: Our previous analysis of Title III application and award data and of other national higher-education data bases has shown that some types of data needed for measuring patterns of institutional development are not collected and that those that are collected, are not collected consistantly (Weathersby, et al., 1977). For the purposes of the proposed investigation, a series of quantitative questions should be asked that specifically deal with quantitative indicators of institutional change. In particular, questions of the following types should be asked:

1. Indicators of institutional change used as Title III eligibility criteria (enrollment, number of faculty, faculty with doctorates, low income enrollments, minority enrollments, etc.). These questions are asked from year to year on the Title III applications, although a few are asked differently. These questions are needed to insure an internally consistent set of quantitative data to compare with qualitative information gathered by the survey and case studies. Title III applications can be reviewed to identify these questions.

2. Indicators of structural development. Most measures of structural development are not consistantly collected by any source. Based on the qualitative analysis of institutional case studies included in this pilot study, it is possible to derive a series of questions that could be used to analyze the structural development patterns of colleges and universities. A few examples include: number of academic departments or divisions, number of schools or colleges, number of faculty in each academic subunit (departments, divisions, schools and colleges), type of appointment held by department/division chairpeople (administrative, faculty or both), number of full-time administrators, number of chief administrative officers, etc. In the development of such a questionnaire, each question should include descriptions that are easily understood by the respondent.

3. Other indicators of institutional change. The Title III program tries to affect a diversity of institutional outcomes; each

can be evaluated by both quantitative and qualitative questions. Ideally, the questionnaire would have as many categories of questions as there are categories of Title III funding. For each category, there would be a series of quantitative questions (i.e. how many students participated in freshman seminars and so forth).

Survey Questions on Structural and Management Development: This pilot study has concentrated on the development of a model of institutional development that focuses on structural and management development, defining an effective management system as one that attains a balance between the state-of-structural development and the state-of-management development. There is considerable evidence contained in the case studies to conclude that this approach is viable for future research. If this approach is to be applied to a survey format, however, a set of general questions should be developed that identify with a relatively high degree of accuracy the state-of-structural and -management development of the institutions being surveyed. If this is accomplished, then it will be possible to make comparisons between structural development patterns and the other outcomes Title III is trying to affect.

Based on the analysis included in this report, it is possible to develop a series of questions that identy an institution's phase of structural development and state-of-management development. Three sample questions have been included here as an illustration. Sample question one phrases a general question about the administrative structure of the college or university that correlates with the analysis in chapter III (see Table III-A). If refined, this type of question would help identify developmental phase. Sample question two asks a similar question about the state-of-management development. It is derived from the analysis in chapter IV (Table IV-A). Again, a refined question of this type would help identify the type of management system in use at the institution and, as well, help identify its phase of structural development. Finally, sample question three is adapted from the analysis in chapter V (Table V-A). It asks a more specific question about the type of planning system being utilized by the institution. Each component of the planning, management, evaluation, and inquiring system would be the subject of such a question, in order to identify the types of developments the institutions are trying to implement. The questionnaire might also ask if these developments have been undertaken with Title III support and/or with support from other sources.

Questions about Other Outcomes. Title III is designed to affect a diverse range of institutional outcomes. The advanced program, for example, is broken down into three general areas: mangement, curriculum development, and student services; and each of these is catagorized into several component areas. Ideally, a set of qualitative questions should be developed for each of these component areas on the general institutional survey. This type of information might be used to improve the types of interventions attempted by Title III. If these outcomes can be related to the general development model, it might have the most possible benefit to the program administration.

SAMPLE QUESTION # 1

1. Which of the following descriptions most accurately describes the administrative decision structure of your college or university?

___ A. There is little administrative development; two or three chief administrators make most decisions; there is a relatively small faculty and student body and the academic structure is not rigidly defined (with academic departments, schools, and colleges).

___ B. There is a formal and well defined administrative structure with several chief administrators (five or more): the academic structure is well defined with two or three major academic departments or divisions.

___ C. There is a highly differentiated administrative structure, with three or more schools and colleges that have major administrative responsibilities for their own affairs.

___ D. In addition to numerous schools, colleges and/or campuses, there is a strong central administration: policies and procedures are coordinated across subunits: program development is often approached in a coordinated fashion.

SAMPLE QUESTION # 2

2. Which of the following most accurately describes the overall management system at your college or university?

___ A. The management system is informal with administrators and faculty collaborating on program development and program maintenance decisions.

___ B. In addition to informal collaborative processes, formal systems have been established for long-range planning, program development, and day-to-day decision making.

___ C. Formal systems have been established for the management of functional subunits (i.e. departments, schools and colleges) and procedures are well defined for administrative subunits (personnel, fiscal affairs, etc.).

___ D. System-wide planning and management procedures have been developed to coordinate subunits' activities and to establish system-wide objectives and priorities. When possible, academic programs and administrative functions are developed system-wide.

SAMPLE QUESTION # 3

3. Which of the following planning capacities does your college now have and/or intend to develop?

A. Short-range program planning capacity (i.e. the capacity to establish new academic programs, including planning for needed facilities and financial support).

___ Have this capacity

___ Intend to develop this capacity

___ Developing this capacity

___ Do not intend to develop this capacity

B. Long-range planning capacity capable of realistically projecting enrollments and finances five years into the future.

___ Have this capacity

___ Intend to develop this capacity

___ Developing this capacity

___ Do not intend to develop this capacity

C. Department and college based planning capacity capable of setting objectives for these subunits.

___ Have this capacity

___ Intend to develop this capacity

___ Developing this capacity

___ Do not intend to develop this capacity

D. System-wide capacity for planning, priority-setting, and goal-setting capable of coordinating a diversified planning system.

___ Have this capacity

___ Intend to develop this capacity

___ Developing this capacity

___ Do not intend to develop this capacity

III. Institutional Survey: Year Two

During the second year of the study, the Title III survey should be administered to funded institutions and to a sample of the non-funded institutions. The reason for administering the survey to all funded institutions (it might be limited to institutions funded the year of or prior to the actual survey) is that it would provide the maximum amount of information about the effects of Title III program on institutional development and change processes. The sampling of non-funded insitutions would allow for some comparisons of change patterns at funded with similar non-funded institutions.

IV. Analysis: Year Two

This dual approach to the study of the effects of Title III will provide a rich information resource. Analysis beyond the mere reporting of results will be limited by time and resources. However, the study, itself, should be designed to allow for maximum analysis time. If possible, the analysis beyond the descriptive reporting of results should be designed to provide the maximum amount of useful information to the Title III program. Three levels of questions can be asked about the program and analyzed from this type of diversified data.

First, what is the nature of the change process of higher education institutions funded in Title III? This is largely descriptive, comparing different types of institutions funded in the various Title III programs. When possible, the change patterns of funded institutions should also be compared to the change patterns of non-funded institutions.

Second, what types of effects can be attributed to the Title III program? On the quantitative side, tests of correlation can be used to relate funding in particular areas to particular types of outcomes. With the qualitative data, it will be possible to gain insight into the actual reasons for high statistical correlations. This can help determine the funding levels and programs that are most likely to have results.

Third, for selected areas, institutional development models can be developed and tested that will be of use to the Office of Education for funding or evaluation. The general model of structural and management development tested and refined here provides a good illustration. Through the use of more diverse case studies and survey data, this general model can be refined so that it is more useful both to institutions and to the Title III program. In addition, the data could be used to propose and test alternative developmental models and strategies for other areas, such as curriculum development and student services.

In this appendix, I have proposed a general study design that will utilize the findings and experience of prior studies of Title III in the development of a new study that can have maximum benefit to the Title III program. There are several possible variations and refinements of the research design proposed here. It is important, however, to include both case studies and institutional surveys in future studies of Title III. The fate of two recent studies of Title III illustrate this. The Hodgkinson and Schenkel study (1974) started with a survey of funded institutions. However, without a developmental model, the survey results were of little apparent use. Then the researchers proposed a developmental scheme and used case studies to refine this model.

Although the specific model was criticized by the Title III staff, the general approach seemed useful. In our own analysis of existing data bases of higher education (Weathersby et al., 1977), we found that few useful measures of institutional development have been collected. Then, in this small pilot study using five case studies to test an institutional development model derived from the literature on higher education management, we have refined the approach used by Hodgkinson and Schenkel. This proposed study is designed to extend further the research in this area and make it useful to the Title III program.

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